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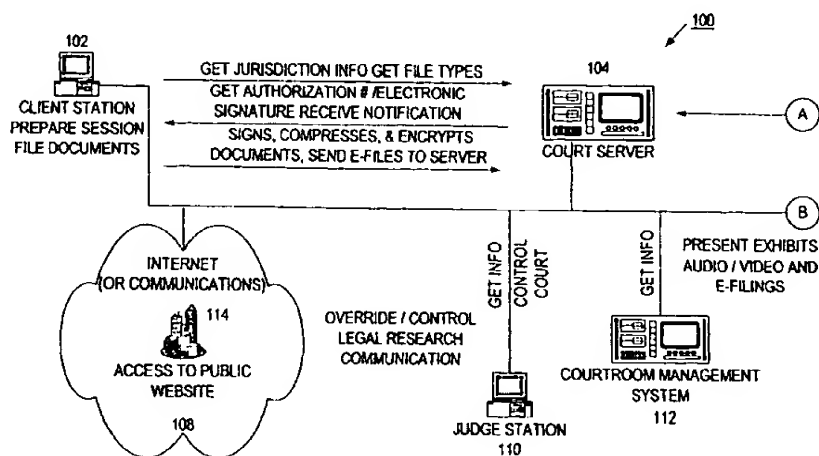
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(54) Title: AUTOMATED COURT SYSTEM



(57) Abstract: An automated court system comprising electronic filing software, an electronic filing server (104), courtroom management (112) software, clerk management software, and judge station (110) software. The electronic filing software enables a client to electronically file multiple documents or files with a court via the Internet. The server (104) processes the electronic filing, stores them in an archive directory, and places the filings on the court's docket. The server (104) also posts information to the court's Internet page for public review of the docket, filing information, and calendar information. The clerk management program interacts with the server (104) to provide functions such as issuing authorization numbers, reviewing files for completeness, and monitoring system resources. The courtroom management software enables the user to present audio and visual courtroom exhibits and presentations in the courtroom. The judge software enables the judge to manually override the entire automated court system.

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AUTOMATED COURT SYSTEM

This application is entitled to the filing date of provisional application 60/153,485 filed September 11, 2000.

- 5 The present invention relates generally to an integrated information system, and more particularly, to an interactive computer system designed to permit the elimination or reduction of the flow of paper throughout a court of law.

Background of the Invention

- 10 Many business and government entities are striving to eliminate the flow of paper in their offices by utilizing only the electronic transfer of information. There are several benefits of this concept, including containing costs, catering to growing public demands, and ensuring that business and government entities obtain the knowledge and experience required to move forward in the future with computer
15 technology.

- Several prior attempts have been made to automate court systems to achieve the above-described benefits. However, it is apparent after years of electronic filing initiatives across the nation, that the design and implementation of these prior systems are experimental at best and do not have an acceptable developmental scheme for
20 implementation in the legal system. These prior systems are also very expensive for litigants.

 Accordingly, there is a need in the art for an automated court system that focuses on automation and resources that will transform technological innovations into immediate benefits for litigants, courts, and the public.

Summary of the Invention

The present invention fulfills this need in the art by providing an automated court system comprising a plurality of client stations for allowing a plurality of clients to electronically file documents with a remote court, a server located at the court for
5 processing the electronically filed documents from the plurality of client stations, a clerk station for interacting with the server to manage the automated court system, a courtroom management system for presenting audio and visual exhibits in a courtroom, and a judge station for controlling the automated court system.

In a preferred embodiment, each client receives identifying indicia from the
10 clerk station prior to electronically filing a document with the server for the first time, the identifying indicia being unique to each client and providing authentication of documents electronically filed by each client. Each client is required to submit its identifying indicia to the server prior to electronically filing a document with the server. The identifying indicia enables each client to electronically file a document
15 with the server from any one of the client stations. Each client may also receive an electronic signature from the clerk station prior to electronically filing a document with the server, the electronic signature being unique to each client and providing authentication of documents electronically filed by each client. Each client is required to submit its electronic signature to the server prior to electronically filing a
20 document with the server. The electronic signature preferably includes a challenge phrase and is encrypted and so that it may be stored on a magnetic storage medium selected from the group consisting of a fixed magnetic storage medium and a local magnetic storage medium. The electronic signature enables each client to electronically file a document with the server from any one of the client stations.

Each client electronically files documents with the server via the Internet. In a preferred embodiment, each client may select at least one jurisdiction and a case within the selected jurisdiction in which to electronically file a document. The client may select a type of filing to submit to the server from a plurality of approved types of filings. Preferably, the approved types of filings are based on a dynamic link library that contains custom information about the selected jurisdiction. The client may transmit coversheet information with the selected type of filing and select at least one document to be transmitted to the server under the selected type of filing. Each selected document is compressed and client identification information is attached to each selected document prior to being transmitted to the server. Preferably, all of the selected documents are compressed and stored in a single compound document along with client identification information. Transmission of the single compound document to the server electronically files each selected document with the server. Each selected document that is filed under seal is encrypted upon transmission to the server and each selected document must be previewed before being transmitted to the server. The client may use an electronic commerce program to pay filing fees when electronically filing a document with the server.

Each client may select at least one person to automatically receive from the server a copy of documents electronically filed by the client and each client receives email notification from the server of the server's acceptance of documents electronically filed by the client. The notification from the server includes a time and a date of the server's receipt of the electronic filing.

The server includes an authorization database that authenticates electronically filed documents. The authorization database includes an encrypted string of clients that are authorized to electronically file documents with the server and the encrypted

string must be synchronized with the client station submitting an electronic filing prior to the server accepting the electronic filing. The authorization database creates a record for each client that is approved for electronic filing. The record includes a name of the client and unique identifying indicia assigned to the client.

- 5 The server notifies the client if an electronic filing is rejected by the server. The server encodes successful electronically filed documents with a time and a date of completion of transmission of the documents to the server. The server automatically sends email notification to the client upon receipt of an electronic filing and the notification includes a date and a time of completion of transmission of the documents
- 10 to the server. The server may also automatically send copies of electronically filed documents to preselected parties. The preselected parties are selected by the client.

The server stores original copies of electronically filed documents in an archive directory and stores electronically filed documents in a case management database table. In a preferred embodiment, the server includes an Internet site that

15 includes a court information center. The server automatically stores electronically filed documents in the court information center and automatically creates a court calendar that is accessible via the court information center. The court calendar may be displayed by date or by case. Each time the court calendar is changed, the server automatically sends notification of the change to preselected parties. The court

20 information center is publicly accessible and includes full text search capabilities. The court information center may be searched for all electronic filings in a particular case.

The server makes electronically filed documents available for display in the courtroom through the courtroom management system and monitors a status of

communication resources used by the system. If the communication resources reach an unacceptable level, the server generates an alarm.

The clerk station issues identifying indicia to each client that is approved to electronically file documents with the server, the identifying indicia being unique to each client and providing authentication of the documents electronically filed by each client. The clerk station also issues an electronic signature to each client that is approved to electronically file documents with the server, the electronic signature being unique to each client and providing authentication of the documents electronically filed by each client. The clerk station may include a case management module that records information selected from the group consisting of nature of the dispute, parties involved, legal personnel involved, relevant phone numbers, and relevant addresses. The case management module may further manage a court calendar, manage a court docket, perform statistical analysis, and generate reports.

The clerk station may include an electronic commerce interface for handling fees associated with electronic filing. The clerk station may also interact with the server to manage a court calendar and provide access to the court calendar on the Internet. In addition, the clerk station may automatically notify preselected parties of changes made to the court calendar and monitors a status of the server.

The courtroom management system makes documents electronically filed with the server available for display inside the courtroom. The courtroom management system includes a podium having a graphical user interface that enables a user to actuate functions of the courtroom management system. The podium includes a function that automatically hides an exhibit on a display screen and includes a timer that times the duration of a presentations. The courtroom management system enables presentation of an exhibit on a display screen. The exhibit may be telestrated

on the display screen in a plurality of colors. The exhibit may be saved to a file or printed by a printer. A specific area of the exhibit may be zoomed in.

The courtroom management system preferably includes a physical object presenter that displays a physical object on the display screen. The courtroom
5 management system may enable presentation of an exhibit on a display screen in a witness box in which the display screen may be telestrated from the witness box. The courtroom management system also includes video jacks for connecting video sources selected from the group consisting of computers, video cassette recorders, overhead projectors, and video cameras and audio jacks for connecting audio sources selected
10 from the group consisting of microphones, tape recorders, and compact disk players. The courtroom management system may enable simultaneous video recording of proceedings in a courtroom, real time court reporting via broadcast over the Internet, and real time court transcription. The real time court transcription may be saved to a file.

15 The judge station preferably includes accessories selected from the group consisting of a calculator, a calendar, a task list, a contacts database, and a sentencing calendar. The judge station may also include a timer for timing durations of courtroom presentations and at least one legal reference library. The at least one legal reference library may include full text search capabilities and search results from the
20 at least one legal reference library may be transferred to an external word processing file. The legal reference library may include an internal word processor. The judge station may further enable live conferencing over the Internet.

The server preferably includes a wireless application protocol that enables wireless access to the server. The wireless application protocol provides wireless
25 access to court information stored on the server over the Internet.

Brief Description of the Drawings

The invention will become apparent to those skilled in the art after reading the following description of the preferred embodiments when considered with the
5 drawings.

Figures 1A and 1B are a block diagram of the automated court system of an embodiment of the present invention.

Figures 2A and 2B are a flow chart of processes of the client station of Figures 1A and 1B.

10 Figures 3 – 7 are screen shots of the client software of an embodiment of the present invention.

Figure 8 is a diagram of an electronically filed document in accordance with an embodiment of the present invention.

15 Figures 9 – 10 are screen shots of the client software of an embodiment of the present invention.

Figure 11 is a diagram of the electronic filing server of an embodiment of the present invention.

Figures 12 – 14 are screen shots of the docket reference center of an embodiment of the present invention.

20 Figure 15 is a screen shot of the court calendar of an embodiment of the present invention.

Figure 16 is a screen shot of the status of an embodiment of the electronic filing server.

25 Figures 17A and 17B are a diagram of the clerk management program of an embodiment of the present invention.

Figure 18 is a diagram of the courtroom management system of an embodiment of the present invention.

Figure 19 is a diagram of the judge station of an embodiment of the present invention.

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Description of the Preferred Embodiments

In view of the complexity of the invention, the overall architecture of the invention is first discussed. Next, specific components of the invention, such as the electronic filing server, attorney software, clerk management system, courtroom
10 management system, and judge software are considered. Examples of screen shots generated by the system are also discussed to better illustrate the preferred embodiment of the invention.

In the following description, like reference characters designate like or corresponding parts throughout the several views. It should be understood that the
15 illustrations are for the purpose of describing a preferred embodiment of the invention and are not intended to limit the invention thereto.

Overview

Figures 1A and 1B illustrate the overall architecture of the automated court
20 system 100. An attorney or *pro se* litigant, herein referred to as the client, initiates an electronic filing with the automated court system 100 at a personal computer loaded with electronic filing client software in accordance with the present invention. This computer is referred to as the client station 102. Any suitable computer can be used including Apple MacIntoshes, servers, and in-house computer networks. For the sake
25 of simplicity these will be referred to as personal computers. The client software

provides an interface for the client to remotely file documents with the court via a communications network 108, such as the Internet. Specifically, the client software enables an attorney or *pro se* litigant to preprocess, compress, electronically sign, and transmit documents to the court system. The preferred interface design allows the user to electronically file the documents in an intuitive step-by-step environment.

A court server computer 104 is provided to process incoming electronic filings from client stations 102. The server 104 performs a variety of functions including: issuing client authorization numbers; reviewing filings for completeness; managing a file database; automatically sending notifications of electronic filings; generating a court calendar; building reports; and monitoring system resources. Server management software, hereinafter referred to as a clerk management program, is loaded onto a personal computer used by the court clerk to provide an interface for the clerk to interact with the server 104 in providing those functions listed above. This is referred to as the clerk station 106.

The automated court system 100 also includes an Internet page 114 that enables the general public to review a court's docket, filing, and calendar information. When the server 104 receives an electronically filed document for a case, it automatically updates the relevant information on the Internet page.

A courtroom interface and presentation control center, hereinafter referred to as the courtroom management system 112, is provided to assist the attorney or *pro se* litigant in presenting both audio and visual exhibits at trials, hearings, or other proceedings in court. Preferably, the courtroom management system 112 is configured in a podium that houses and manages all electronic documents, resource displays, and control services required to automate and display any electronic medium accepted by the court.

The automated court system 100 further includes judge software that is loaded onto the judge's personal computer to enable the judge to manually control, or override, the entire automated court system 100. This is referred to as the judge station 110. The judge is able to the control the electronic filing system, including the processing of incoming files by the server 104, management of the clerk station 106, and control of courtroom presentations using the courtroom management system 112.

Client Station and Electronic Filing Process

Figures 2A and 2B are a flow chart illustrating the electronic filings processes performed by the client station 102 shown in Figure 1A.

The electronic filing process may be initiated at the client station 102 once the client software 200 is loaded onto any type of personal computer technology for an attorney or *pro se* litigant who desires to remotely file documents with the court. The client station 102 is required to call the system administrator to request to electronically file documents in a specific case or, in a preferred embodiment, go to the court's Internet site using a conventional web browser or other access tool to submit an e-filing application (210,212). When the client is approved for electronic filing, an email is forwarded by the court server 104 to the client with details for downloading the client software from the Internet site of the jurisdiction using the automated court system (214). Alternatively, the client software may be distributed in the form of magnetic media, including compact disks and diskettes. An attorney's manual, index of court rules, and document guidelines reference, each of which is associated with the client software, may also be downloaded from the Internet or distributed in magnetic, paper or other media. In addition, a more advanced version

of the client software that addresses optional law firm management concerns (those not directly related to functions of the court) may be available.

The client software requires the client station 102 to obtain an authorization number from the court in order to provide security and identification when electronically filing a document. The use of an authorization number provides clients the flexibility of not relying on a dedicated piece of equipment to file in the court. For example, the client may file the document at the courthouse in the same way he or she can electronically file from his or her office. The authorization number is issued by the court server 104 and is unique to each individual party of each case, and the litigant. Thus, the authorization number cannot be used to file in any other action.

In addition to providing instructions for downloading the client software, the email notifying the client of approval to electronically file further includes instructions for implementing the client software, the authorization number for the specific party and case in which the client will be filing documents, and additional details about the case (214). Once the client installs the client software 200, the client is ready to electronically file a document with the court (216).

The client may use the client program to file documents in any court using the system 100. When the software is activated, the client program allows the client to select the jurisdiction of the desired court in which the documents will be filed, using screen prompts such as is shown in Figure 3 (218). The client software allows multiple documents to be filed in a single session. Further, the client software allows simultaneous filing of documents in multiple jurisdictions, court locations, and court levels. This is achieved via a utility that requires the entry of a URL or IP address that points to the server used by the specified jurisdiction of a specific court jurisdiction. The client then retrieves information from a file on the court server 104

that supplies the client with information vital to communicate with the server, in addition to other information that may be required by the court such as the court title, IP address, IP port, court approved document file formats, and plug-in information.

The client retains the information and checks for updates or changes when the court is
5 accessed by the client.

Upon first use of the client software, the client is prompted to fill in an electronic signature application (220). The encrypted electronic signature contains information about the client and a challenge phrase that allows the court or agency to authenticate electronically filed documents. Thus, the electronic signature may be
10 used in place of an authorization number to authenticate all documents filed with the system. Preferably, the electronic signature capability meets the standards of most government electronic signature guidelines and is portable from machine to machine. Similar to the authorization code, the preferred electronic signature provides full encryption of document processing and a multi hash system for reliable file
15 authentication. Once the application is complete, the electronic signature is encrypted and saved to a local fixed magnetic storage medium or a removable magnetic storage medium, such as a floppy disk. This allows the signature to be used both locally or on another computer, such as a public personal computer at the court house or other location.

20 After filling out the electronic signature application, the client is ready to connect to the selected court jurisdiction (222) and test the quality of the connection if successful. In the preferred embodiment, after the client's first use of the client software, the client is able to connect to the selected court jurisdiction without having to fill out the electronic signature application. The communication link between the
25 client and the server is provided using TCP-IP via the Internet or other asynchronous

telecommunication means to the court server 104. The client software includes a Windows interface to both interact with the court database and transport documents to the court. The interface of the program displays common terms and obvious functions that are routinely used in a particular court system.

5 If the connection is not successful, the client is notified of the possible reasons for failure and is not allowed to proceed until the necessary corrections are made. For example, if the client software program is not the latest version, the user is prompted to download it from the Internet and may not be allowed to proceed until the update is installed.

10 If the connection is successful (226), the client retrieves the time and date of the court's server 104 for the purpose of time stamping the electronic signature application (224). This information is encrypted to prevent changes in the demographics of cases and to speed up the filing entry process. The client is then able to download from the court server 104 a list of the cases in the specified jurisdiction
15 that are authorized for electronic filing (228). The user searches the list and selects a specific case, as shown in Figure 4. All of the demographics of the selected case may then be downloaded from the server (230). In the embodiment shown in Figure 4, the list is of case numbers, with information about the parties, counsel, and judge for the picked number shown to the right. If desired, the screen can be configured to set the
20 pick list from another indexed variable, such as party name.

 In order to proceed, the client is prompted to enter the authorization number provided by the court and the client's electronic signature (232). The client program then transmits a hash string of the authorization number and specific information from the electronic signature to the server. The server 104 returns an approval or
25 disapproval for allowing the client to proceed to the next step. Approval will be based

on the authorization number's matching a stored list of approved numbers for that case.

If authorization is approved, the client is prompted to select the type of filing to be submitted to the court (234), as shown in Figure 5. Basic court filing parameters, such as types of motions and civil actions, are pre-coded into the system for approval. In a preferred embodiment, the approved file formats are based on the "plug-in" parameters of the court. A plug-in may be a DLL (dynamic link library) that contains additional or custom information about each specific court jurisdiction added to the system 100. As noted above, the client software is designed to allow filings in multiple jurisdictions.

The applicant then moves to an area of the program that contains selection or data entry fields specified for the court receiving the filing, as shown in Figure 6. This information is specified as the setup file on the court's server and eliminates the use of coversheets by transmitting the coversheet information with the filing to be automatically entered in the court's database (236).

The client is next provided with a display that prompts the user to select multiple documents or files to be submitted to the court for the selected case (238), as shown in Figure 7. Only document and file formats that are approved by the court appear for selection, thus ensuring that non-desirable file formats are not accidentally chosen. Common types of documents that are submitted to the court are word processing documents that are prepared by the client off-line using an over-the-counter software program, such as Microsoft Word® or WordPerfect®. The client software preferably includes a rules-checking routine to assure compliance with the paper requirements of the court's rules, for example whether a document exceeds a page limit. This double function makes it much easier for the client to satisfy paper

filing requirements than other currently used methods. In addition to selecting the documents to be transmitted to the court, the client may also select additional recipients that he or she wants to receive the electronic documents, as shown in Figure

7. For example, the client may choose to have the filing automatically emailed to
5 another party.

When document selection is complete, the client program compresses the selected files, electronically signs the collection (240), and attaches vital information such as authorization information, as shown in Figure 8. Documents that are filed under seal are fully encrypted upon transmission. The client program then stores the
10 electronic signature, the compressed files, specific case demographic information, and other filing information in a single compound document that is prepared for transmission to the court (242), as shown in Figure 8. An e-commerce interface may be used to electronically pay any filing fees, in accordance with the court rules and procedures.

15 The next step forces the client to preview the complete filing before proceeding to the final step of transmitting the filing, using the screen of Figure 9. This gives the client an opportunity to make changes to the filing prior to transmission (244). The client then selects to transmit the filing to the court and the court server encodes the file with the date and time that transmission begins, as shown in Figure
20 10 (246).

Finally, the files are transmitted to the court's server (248). Once transmission of the files is complete, the court server encodes the files with the date and time of completion of the electronic filing. This is the official time and date of receipt.

The court server 104 automatically sends the client station an email notification of acceptance of the electronic filing that includes the filing date and time from the electronic filing server (250). Also, all parties and judges are automatically notified by e-mail of the electronic filing by the court server 104. The client may
5 print out copies, send faxes, or email his or her client, another attorney, or any other party, if the party was not submitted on the list for automatic notification, as discussed above. The court's publicly accessible web site 114 permits downloading and reviewing electronically filed documents when documents are filed.

The client software program is configured to provide the client with additional
10 services that are not previously discussed. There is a built in communications tester for the client. If, for example, Internet services are not available, the client software allows facsimile transmission of filings. In addition, the client software allows case management for filings in route by alternate mediums, such as paper, compact disk, or diskette. The client software also allows documents that are scanned in the
15 courthouse to be electronically filed.

Electronic Filing Server

The electronic filing server 104 shown in generalized form in Figure 1A is shown in more detail in Figure 11, provides the variety of network interfaces and file
20 handling capabilities required to make the system active. The server 104 typically resides at the court. This gives the court full control of the system and eliminates the dependency on third party providers of the different elements of court automation.

As noted above, the electronic filing server 104 handles the incoming filings to the court and notification services that inform opposing counsel, court officials, and
25 other designated recipients of the filings received by the system. The hardware for

the electronic filing server includes, but is not limited to, a Pentium® processor, Windows® NT OS, rack mounting, and UPS backup. The server provides a network interface via a local area network ("LAN") 136 for in-house use of the services and an Internet interface via server 104 for public access. The server database interface
5 allows for use of a variety of database technologies via ODBC including MS SQL server, Oracle, and MS Access. Other suitable databases may be substituted.

The server 104 of the present invention eliminates dependency on a single main frame system, and thus relieves the system from only being able to sample information desired for archive. Server 104 is preferably multithreaded for processing
10 large documents and multiple documents in a single transmission.

Information received by the electronic filing server 104 is documented in the court case database tables 126, 128, 132, 134 and is then automatically made available to the public via a web server function of file server 104. The server includes a built-in Internet Browser and document viewing capabilities for popular file formats
15 approved for use in the court. The server is password protected and houses a restore function of the system backup. Preferably, this is the only restore function in the system. This feature provides a positive interface for system security. These tables may reside on server 104 or another associated memory unit.

When the electronic filing server 104 receives transmission of a document
20 from a client, it checks all of the information in the filing, including the authorization code and the electronic signature. Specifically, the server maintains an authorization database table 130 that provides a utility to authenticate filings submitted to the court. The authorization database table 130 includes an encrypted string of authorized applicants that must be synchronized and validated with the client program when an

applicant is preparing an e-filing. The authentication is performed on the archive original of the file.

If the filing information is invalid or incorrect, the server 104 rejects the unauthorized file, rejects access to the system, and notifies key personnel of these events. The server 104 also attempts to notify the client that the file was not approved and the reason why it wasn't. These measures prevent clients from filing incorrectly, in error, or in deceit.

If the transmission of a filing is corrupted by communication errors, the electronic filing server 104 automatically rejects the corrupted transmission and notifies the client.

On the other hand, if the filing information is valid and the transmission is stable, the electronic filing server accepts the filing, places a date and time stamp on the document and encrypts the original document. The system then continues with the following functions.

The file for the transmitted document is automatically copied to three locations. The first is an archive directory 138 specified by the administrator of the system to store all original documents for authenticity. In the next location the file is decompressed and stored in a database 134 specified by the administrator as the court's working file directory for use by the court personnel, including the judge. The third location is assigned as a directory 122 for web access to the documents for public and/or remote access and viewing of the filings, referred to herein as the docket reference center.

The server automatically and dynamically creates the docket reference center, thus eliminating the need for the court to design or maintain the website interface.

Multiple files are kept together in the docket reference center in a compressed format

to allow remote viewers to access and/or download the files in an organized state with minimal download time. Databases and output from the system are designed to maintain XML compliance with naming conventions outlined by legal XML developments for upward compatibility. Other Internet or telecommunication protocols may be substituted. The web server function of the server 104 handles http requests and generates the requested document containing the requested information. The web server function provides full text search capabilities and the ability to retrieve research results.

The electronic filing server is designed to process all communications with and requests from the court, in addition to providing internet access to the court's docket reference center. The docket reference center includes information on all of the court's filings and the court calendar 132, as shown in menu screen of the docket reference center in Figure 12.

The hardware for the docket reference center Internet site includes but is not limited to, a Pentium® processor and Windows® NT OS. The docket reference is dynamically generated by the server software and is publicly accessible through the web so it alleviates the need for web page programmers or other Internet expertise. This function of the system also greatly reduces overhead costs. Access to the web site docket reference center may be made with a web browser such as Microsoft Internet Explorer® 4.01 or Netscape® 4.0, to view a screen such as Figure 12. The electronic filing server also maintains and posts all pertinent information to a case management database 126. Thus, when a client enters a case number in the web based interface of the docket reference center, the electronic filing server 104 retrieves filings submitted to the court for that case in addition to filing information specified by the court, as shown in Figure 13.

The server 104 may also include a wireless application interface that uses the methods defined in the Wireless Application Protocol (WAP) 118. Courtroom servers that are configured with this option also run a WAP server. The WAP server is configured to provide users of wireless mobile phones, personal digital assistants (PDAs), and the like, having Internet capabilities, with access to court based information using a .wml file format. This web page information includes, but is not limited to, court calendars, case demographics, electronic filing information, court messaging, and court announcements. Thus, the WAP server makes wireless service available to a wide spectrum of mobile phones and personal digital assistants via the mobile Internet.

Next, the server decodes specific coversheet, demographic (i.e. names of parties, counsel and judge), and file descriptive data and stores the information in a database table. This database information is integrated with the case management database 126 for further processing of the electronically filed document.

Once this processing is complete, the server 104 sends an email to the client to notify the client of the success of the e-filing and lists the date and time of the filing. The server application then searches the case management database table 126 for all parties that are involved in the case and sends a notice of service of process of the e-filing to all parties and the judge via email. If a party does not have an email address, the system may be configured to fax the party. If the party does not have a fax number available in the system, the system may be configured to print the notice for the court to mail.

By interacting with the clerk management program at the clerk station 106, discussed below, the server generates a public court calendar database 132, which is accessible via the docket reference center, as shown in Figures 14 and 15. The web-

based interface allows viewers to display the court calendar for any specific date or all calendar events for any specific case. The calendar may be reviewed and changed with a simple 'double click' function that immediately updates the court's information center and automatically notifies parties of the update via email, fax or printed notice.

5 Interaction with the clerk management program also enables the system to generate an encrypted case information file for the internet interface. This file contains case demographic information collected by the system case management database table 126. The case management database table allows for standard plaintiff/defendant and multiparty case management via the clerk management
10 program. The encrypted case information file is used by the client to retrieve specific information required for an electronic filing and avoid mistyping of demographic information.

 The electronic filing server 104 further interacts with the courtroom management system 112 to allow control of additional devices in the automated court
15 system such as video, video playback, sound, and broadcast of electronic real-time court reporting. It also stores images or documents requested by the system 112. Also, the server 104 makes the files for a particular case available to a client for presentation in the courtroom, and provides a satellite courtroom interface. These features are further discussed below in the section regarding the courtroom
20 management system 112.

 The electronic filing server 104 automatically performs the above-described functions without the need for user intervention. The server and case management information resources are administered in-house by a network-managed program. This module serves as a remote control application to manage all case information
25 and courtroom services in the facility. The electronic filing server also monitors the

amount of space available on the system, communication resources, system resources, and system status. As shown in Figure 16, an alarm is produced if a service is down or if there are unacceptable bandwidths for the communication resources. In addition, the server keeps a log of all accesses, problems, and other vital changes to the system.

- 5 A system back up is performed at designated intervals to protect information stored in the filing system.

Clerk Station

- As seen in Figures 17A and 17B, the clerk management program provides
- 10 many important maintenance features of the automated court system (700). Most of these features may be categorized as the management of cases, files, or resources, although several other important features exist as well. The main modules of this system include: authorization and validation (702); case management (708); accounting services (728); web management (732); notification (736); and monitor
- 15 server status (740). In most of these modules, the clerk management program interacts with the automated court system server 104, sending and receiving the appropriate information as needed.

- The clerk program provides authorization and validation algorithms to handle security issues and prevent unauthorized editing and tampering of files. In order to
- 20 guarantee security, the clerk program provides authorization numbers (704) and validation of electronic signatures (706). As discussed above, an authorization number is assigned to any client who is approved by the court clerk to electrically file a document. An authorization number is unique to a particular client and can only be used to archive or retrieve that client's files for a particular case. When a client has
- 25 been issued an authorization number and approved for e-filing, a record for that client

is established in the authorization database 130 of the system server 104 (710). The database record includes the name of the client, the files that the client has selected to be electronically filed, and the authorization number for that client.

In order to validate electronic signatures, the system runs a decryption
5 algorithm on an incoming electronic signature to verify that the file and the attached signature are legitimate. The decryption algorithm varies according to the type of encryption used. If the electronic signature does not comply, then a notice is sent to the appropriate parties via email.

Most of the features implemented in the case management module 708 can be
10 edited using the case management interface program, described below.

The case management interface program is themed as a desktop program similar to that used by the judge at the judge station 110, discussed below. The case management interface program includes the following modules: a case information module, which contains information on case status and information on the parties
15 involved; a court calendar, which includes, yearly, monthly, and daily information on hearing times, parties, and locations; and a docket wizard, which allows for automatic creation of commonly used legal forms, annotations, and system postings, etc.

The case information module serves as a general "case manager" by recording and storing information such as the nature of the dispute, parties involved, legal
20 personnel involved, phone numbers, and addresses. The information entered in the case information module interacts with the court calendar and docket wizard for easy scheduling and editing.

The case management interface program also provides automatic editing and updating of an interactive court calendar (712). Some of the features of this calendar

are scheduling a matter on a specific date, specifying the duration of the matter, and specifying the location of a hearing.

A docket wizard feature (714) is provided to allow for easy editing of a court docket. Specifically, the court docket contains several fields that provide an easy interface wizard to post matters to the court system. The docket wizard provides easy construction and maintenance of court dockets, as well as other postings to the automated court system 100. The docket wizard can produce new schedules on the court calendar or edit existing schedules. Some of the fields present in the wizard include the type of event (trial, video conference, etc), legal personnel, date and time of event, and location. The docket wizard can also post court based e-filings, case notes, continuances, orders to mediation, and court orders.

Statistical analysis is performed on case management for the automated court system (716). Some of the statistics generated are: active cases; inactive cases; cases on appeal; cases in mediation; total number of cases; and total number of e-filings, etc. A report generator (718) publishes a variety of reports about the automated court system including reports on statistics, server status, and case management. The reports may be printed on any printer connected to the automated court system.

The case management interface program also includes a document management wizard (720) that allows a user to scan documents that are submitted to the court by any means other than electronically filing over the Internet. Such documents may be in paper format or electronic format. This function provides the court with the capability to maintain the system's database integrity and continuity with other automated resources. The wizard also allows the clerk or user to annotate the scanned documents (722), post matters to the court calendar, and post and print a variety of court forms (724), such as court orders, mediation orders, notice of

hearings, and continuances. The wizard further allows the court clerk or user to provide case notes (726). This interaction is accomplished with a simple screen-by-screen selection process for fast and accurate processing.

- Accounting services (728) may be provided to handle filing fees (730)
- 5 associated with the electronic filing process. This may be accomplished by modification of a standard e-commerce front end.

- The clerk program further contains an automatic web management scheme 732 that updates the court calendar and the court docket on the Internet via the web server function of server 104. When a new filing is posted, the information becomes
- 10 available on the web, thus eliminating the need for manual web design. The information posted on the web comes from a case resource file that is updated every time the court calendar or court docket is changed (734).

- A notification scheme (736) informs selected parties or optionally all parties that the court calendar or docket has been changed (738). This can be done by
- 15 automatic email, fax, or paper. The proper parties are also notified whenever a successful e-filing has been completed.

Finally, the clerk program monitors the courtroom server to keep track of the server's status (740). The server's status may be online or offline.

20 **Courtroom Management System**

- As seen in Figure 18, the courtroom management system 112 is desirably controlled from a courtroom podium to present exhibits and control presentations in a courtroom through the use of electronic filing and specific media formats. This program manages electronic documents, resource displays, and control services
- 25 required to automate and display electronic media accepted by the court and provided

by clients for exhibition in the courtroom. Specifically, the podium or courtroom management system 112 controls the documents, videos, and graphics that are displayed on oversized monitors in the courtroom. Network jacks are provided at each party table to provide attorneys with remote access to the system with their own
5 personal computer or monitor. The judge and/or clerk is able to override the client's console to assist in the presentations if needed. The hardware for the courtroom management system includes, but is not limited to, a Pentium® processor and Windows® NT OS.

An intuitive graphical interface for the courtroom management system 112 is
10 made available via a flat touch-screen monitor provided on the podium in the courtroom. Therefore, the system requires a minimal amount of skill from an exhibitor. The podium may be of either any desired design, and the podium system 112 may utilize Windows 2000®.

The courtroom management system 112 allows the user to decide which
15 presentation format he/she wishes to put on display. Specifically, a menu (802) is provided that allows the user to open (804) and view (806) all documents and exhibits filed in the electronic filing server, including a OLE object associated files. However, only the filings in a particular case are made available through a direct link for the parties accessing the system. These files and exhibits may be easily accessed through
20 a bar coding system. Some of the supported file formats include, but are not limited to, the following: text files; HTML Files; RTF Files; MS PowerPoint; Adobe PDF; Mpeg Video; and Jpeg Graphics Format.

Files are displayed in a list format by party (plaintiff or defendant), or by exhibit number. There is also a "show all files" option that shows every file present
25 in the current case. Browsing features make file navigation easy, and the system is

able to import exhibits from sources other than the e-filing Server 104, such as floppy diskette or CD-ROM.

The presenter is able to also mark exhibits (820) through the use of interactive presentation tools. These tools most commonly include, but are not limited to, a pen (824), finger or other on-screen drawing device. The pen uses a color palette (830) to
5 determine the on-screen drawing color. A zoom feature is provided that allows zooming in on a screen-captured area (822).

The courtroom's witness box also includes a monitor for telestration of exhibits via touch screen technology. In this way, the witness's annotations of
10 exhibits can be clearly seen from the screen, and still shots taken of the screen can preserve the annotations as evidence.

There is also a "kill switch" that the podium operator or the judge (via the judge program at the judge station 110) may use to control the presentation of exhibits. The kill switch feature allows the podium operator or judge to "kill" the
15 screen if the exhibit being presented is deemed unsuitable for viewing. The kill switch essentially hides the screen and shows a backdrop. The operator can restore the screen, if necessary, by using this same feature.

The podium has a timer for the plaintiff and the defendant at the bottom of the screen. This timer is controlled by the client; however, the judge may override the
20 podium from the judge station 110.

The courtroom management system hardware also includes means for video display and control from a plurality of video sources for video conferencing, and several standard video inputs for connecting video devices. Such devices may include computers, voice activated video cameras, overhead projectors, video cassette
25 recorders (VCRs), other video storage devices such as DVD's and other alternate

video sources (812). Controls are provided to allow computerized control of the VCRs (808), each VCR having a computer interface that allows this electronic control. The images output by the VCR are displayed on the podium screen. The VCR supports common functions such as play, rewind, fast forward, and pause, all of which have controls in the podium-VCR interface. There is also a timer function that enables forwarding to a specific time on a tape.

In addition, the hardware for the courtroom management system includes several audio inputs for connecting devices such as microphones and tape recorders. A super stack II switch 3300 (2410 x 100 auto sense ports) and sound control equipment are also provided.

The courtroom management system 112 allows simultaneous video recording of proceedings and exhibits, and real time court reporting via Internet broadcast for up to approximately 254 users.

A three-dimensional visual presenter (810) interface sold under the trademark "Elmo" is also provided for physical object presentation. Similar to the VCR controls, the Elmo is controlled from the podium. Common features include a control that "zooms in" or "zooms out" on an object and a control that changes the object's orientation by switching between multiple cameras.

The user is able to browse back and forth through a list of open exhibits from the podium. This browse utility is similar to that used in internet browsing (backward, forward). All open exhibits for a case, however, must be closed before switching cases at the "Finish" module (814). In order to switch cases, the keyboard controls (815) must be activated and they are not accessible until all open files have been closed. The keyboard controls button opens a keypad that controls features that can only be accessed by certain alpha-numeric codes. These controls contain system

related functions as well as user-defined settings and options that initialize and maintain the courtroom management system. Keyboard controls lets the operator use a password to gain access to the case management features of the podium. If the password is accepted, a fully functional alphabetical keyboard appears on the screen
5 along with a case selection tool. The user may type normally to enter data or use the mouse on the on-screen keyboard. Several basic maintenance options are available including: clear exhibits, which clears all the exhibits in the currently selected case; and system setup, which provides several fields which must be filled in order to initialize key aspects of the courtroom management system. These fields may include
10 case server location, podium IP address, video conferencing IP address, and pathnames to local devices such as CD-ROM drives, VCRs, and the Elmo.

The presenter may make any specified presentation format (text, audio, etc.) into an official exhibit (826). The user must first choose the party (plaintiff or defendant) for which the exhibit is to be made. Then the user enters the exhibit
15 number on a numeric keypad (either physical or on-screen) and confirms the selection. Then an option is given to either save the exhibit using the specified exhibit number or cancel the process without saving. The system may also print an open exhibit on the system's default printer (or other setting) (828).

Documentation for using the courtroom management system may be provided
20 via the Internet with publications produced by and on the system. Further, video training tapes and stand-alone versions of the program for off-site training and practice of the controls may be provided.

Judge's Station

As seen in Figure 19, the automated courtroom system also provides judge software (900) that allows the judge to control the entire court automated system from a judge station 110. Using a Microsoft Office® interface, the judge can create a CD of all filings in a case and control the courtroom management system. For example, the judge can display, edit, and telestrate any document for the entire courtroom. In addition, the judge and/or clerk can split his or her screen simultaneously to view the court's resources and the task being performed during a hearing. The judge can also perform legal research and check cited authority. This may be done in conjunction with a law database provider. The judge software program further includes an automatic bailiff and jury orientation interface, and allows the judge to produce and process jury instructions.

The judge program generally consists of a taskbar at the bottom of the screen. From this taskbar, the judge can choose from several standard accessories. There is a calculator (902) with several functions, including a standard mathematical calculator, a metric calculator, a financial calculator, and other commonly used conversion calculators. Other accessories include: a calendar (904) that allows for yearly, monthly, and daily planning and an appointment scheduler that schedules appointments by date, time and duration; a to do manager (908) that keeps track of reminders; and a contacts database (910) that can be sorted in a variety of ways.

The judge program also features a courtroom timer (906) used by the judge to monitor the amount of time given to each party for presentations. A timer interface controls the courtroom timer via network protocol. The timer can be started, stopped, and reset; however, if the plaintiff is being timed, then the defendant timer becomes inactive, and vice-versa.

A sentencing calculator (912) allows for the selection of multiple sentencing charts according to date and allows the choice of several different felony or misdemeanor classes. It then displays the relevant sentencing information in terms of disposition, aggravated range, presumptive range, mitigated range, and points. A
5 maximum sentence can be calculated by entering a sentencing value and a felony/misdemeanor class.

The judge's program also features a multitude of legal reference libraries (914). Legal libraries typically consist of state-specific statutes, jury instructions, constitutions, bench books, civil law, criminal law, and motor vehicle law, although
10 there may be other types as well. These electronic documents facilitate easy navigation, search capability, editing, and processing of these legal libraries. The interface for the legal libraries supports browsing, searching, and book marking. The library program also handles standard Windows functions such as opening and closing files, printing, saving, copying/pasting, and zooming, etc. The legal libraries
15 function also contains its own custom word processor that can be used to easily edit and process electronic documents. An open document may be appended or inserted into this word processor to build a custom document. This word processor contains many custom features specialized towards the legal industry such as removal of footnotes and automatic editing of parentheses and brackets, as well as most general
20 word processor functions. A quick-prep feature exists in which multiple documents may be selected and sent to the word processor to be edited in a single file. After the necessary processing of the document has been finished, it may be sent to another word processor (if needed), such as Microsoft Word, WordPerfect, etc.

The judge program allows a user to download current versions of the judge
25 software or updated legal libraries from the Internet (916). When an Internet update is

available, the judge program checks its own system files and the legal library files to see if an upgrade is available. If an upgrade is available, the program automatically downloads it and overwrites the file accordingly.

The e-filing client feature (918) uses network protocols to implement the transfer and retrieval of electronic files to and from a storage database in the server 104. A research assistant (920) searches all the files in a specified location for specified words or phrases. The research assistant needs only a pathname in which to look.

The system setup options (922) retrieve pertinent user information that is needed to enable options in the judge program. This information may include: an Internet download account number to allow new libraries to be downloaded; an IP address, port, and password for control of the courtroom management system 112; an e-filing setup consisting of a database path and a back office path for document preparation; a research assistant setup to specify the drive path on which to search for personal research files; and a court call setup, discussed below.

An Internet services conference call (924), referred to as court call, may be provided for in-court conferencing, inter-court conferencing, or technical support. The user may connect to the Internet and the court call server via network protocol. A plurality of virtual conference rooms exists in which lawyers, judges, and support staff may confer. Some rooms are static, meaning they are always open, and some are dynamic, meaning that a user has requested a private chat. Dynamic court rooms are destroyed after use. The court call system also supports paging of other users of the judge program if they are online.

The courtroom controls (926) option gives specialized controls to the judge to control the entire courtroom management system 112 as well as other aspects of the courtroom presentation.

The real-time court reporting (928) option offers real-time transcription during
5 a court proceeding. The transcript may be saved to a file for later reference.

The automated court system of the present invention interactively provides services such as electronic filing, trial court administration, exhibit technology, and remote access to public information. The filing system is developed in a modular concept, thus allowing tailoring of its functions to satisfy specific court rules, legal
10 policies, the needs of the courts, and the needs of members of the bar. The automated court system allows a document to be electronically filed via the Internet, processes the filing to a court case management system, electronically files the document for archive, and places the filing on the court's docket, all in a matter of a few minutes. This procedure also immediately posts information to the court's web page for review
15 of docket, filing, and calendar information, without requiring programming or web page design skills. Management of this information is nearly effortless for court administrative staff.

In addition to the many benefits of automation, the architecture design of the present invention reduces the training costs usually associated with using multiple
20 technologies. This method of development reduces hardware and software costs for future enhancements of the system by eliminating additional support equipment, software, training, and electrical requirements.

The automated court system of the present invention provides not only state of the art technology resources to attorneys accessing the court, but also much-desired
25 automation needed by the court to lower costs and reduce the time involved in the

litigation process. Successful execution of the system can supply a blueprint for other industries interested in utilizing an interactive system to reduce the flow of paper.

The program functionalities set forth herein do not include detailed flow charts or programming code. Those of ordinary skill in the art may prepare code and
5 hardware configuration as described herein without undue experimentation based upon the guidance set forth above, and with the use of commercially available software.

Certain modifications and improvements will occur to those skilled in the art upon a reading of the foregoing description. For example, client program users are not
10 limited to attorneys and judges. Any person with authorization may access the automated court system. Also, the system may be utilized by any type of agency and is not limited to a court of law. It should be understood that all such modifications and improvements have been omitted for the sake of consciousness and readability, but are properly within the scope of the invention.

What is claimed is:

1. An automated court system comprising:
a plurality of client stations for allowing a plurality of clients to electronically
file documents with a remote court;
5 a server located at the court for processing the electronically filed documents
from the plurality of client stations;
a clerk station for interacting with the server to manage the automated court
system;
a courtroom management system for presenting audio and visual exhibits in a
10 courtroom; and
a judge station for controlling the automated court system.
2. The automated court system of claim 1 wherein each said client receives
identifying indicia from the clerk station prior to electronically filing a document with
15 the server, the identifying indicia being unique to each said client and providing
authentication of documents electronically filed by each said client.
3. The automated court system of claim 2 wherein each said client is required to
submit its identifying indicia to the server prior to electronically filing a document
20 with the server.
4. The automated court system of claim 2 wherein the identifying indicia enables
each said client to electronically file a document with the server from any one of the
client stations.

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5. The automated court system of claim 1 wherein each said client receives an electronic signature from the clerk station prior to electronically filing a document with the server, the electronic signature being unique to each said client and providing authentication of documents electronically filed by each said client.
- 5
6. The automated court system of claim 5 wherein each said client is required to submit its electronic signature to the server prior to electronically filing a document with the server.
- 10 7. The automated court system of claim 5 wherein the electronic signature includes a challenge phrase.
8. The automated court system of claim 5 wherein the electronic signature is encrypted and may be stored on a magnetic storage medium selected from the group
- 15 consisting of a fixed magnetic storage medium and a local magnetic storage medium.
9. The automated court system of claim 5 wherein the electronic signature enables each said client to electronically file a document with the server from any one of the client stations.
- 20
10. The automated court system of claim 1 wherein each said client electronically files documents with the server via the Internet.
11. The automated court system of claim 1 wherein each said client may select at
- 25 least one jurisdiction in which to electronically file a document.

12. The automated court system of claim 11 wherein each said client may select a case within the selected jurisdiction in which to electronically file a document.
- 5 13. The automated court system of claim 11 wherein each said client may select a type of filing to submit to the server from a plurality of approved types of filings.
14. The automated court system of claim 13 wherein the approved types of filings are based on a dynamic link library that contains custom information about the
10 selected jurisdiction.
15. The automated court system of claim 13 wherein the client may transmit coversheet information with the selected type of filing.
- 15 16. The automated court system of claim 13 wherein the client may select at least one document to be transmitted to the server under the selected type of filing.
17. The automated court system of claim 16 wherein each selected document is compressed prior to being transmitted to the server.
20
18. The automated court system of claim 16 wherein client identification information is attached to each selected document prior to being transmitted to the server.

19. The automated court system of claim 16 wherein all of the selected documents are compressed and stored in a single compound document along with client identification information.

5 20. The automated court system of claim 19 wherein transmission of the single compound document to the server electronically files each selected document with the server.

21. The automated court system of claim 16 wherein each selected document that
10 is filed under seal is encrypted upon transmission to the server.

22. The automated court system of claim 16 wherein each selected document must be previewed before being transmitted to the server.

15 23. The automated court system of claim 1 wherein each said client may use an electronic commerce program to pay filing fees when electronically filing a document with the server.

24. The automated court system of claim 1 wherein each said client may select at
20 least one person to automatically receive from the server a copy of documents electronically filed by the client.

25. The automated court system of claim 1 wherein each said client receives notification from the server of the server's acceptance of documents electronically
25 filed by the client.

26. The automated court system of claim 25 wherein the notification from the server includes a time and a date of the server's receipt of the electronic filing.
- 5 27. The automated court system of claim 25 wherein the client receives the notification from the server via email.
28. The automated court system of claim 1 wherein the server includes an authorization database that authenticates electronically filed documents.
- 10 29. The automated court system of claim 28 wherein the authorization database includes an encrypted string of clients that are authorized to electronically file documents with the server and the encrypted string must be synchronized with the client station submitting an electronic filing prior to the server accepting the electronic
- 15 filing.
30. The automated court system of claim 28 wherein the authorization database creates a record for each said client that is approved for electronic filing.
- 20 31. The automated court system of claim 30 wherein the record includes a name of the client and unique identifying indicia assigned to the client.
32. The automated court system of claim 1 wherein the server notifies the client if an electronic filing is rejected by the server.

25

33. The automated court system of claim 1 wherein the server encodes electronically filed documents with a time and a date of completion of transmission of the documents to the server.

5 34. The automated court system of claim 1 wherein the server automatically sends notification to the client upon receipt of an electronic filing.

35. The automated court system of claim 34 wherein the notification includes a date and a time of completion of transmission of the documents to the server.

10

36. The automated court system of claim 1 wherein the server automatically sends copies of electronically filed documents to preselected parties.

37. The automated court system of claim 36 wherein the preselected parties are
15 selected by the client.

38. The automated court system of claim 1 wherein the server stores original copies of electronically filed documents in an archive directory.

20 39. The automated court system of claim 1 wherein the server stores electronically filed documents in a case management database table.

40. The automated court system of claim 1 wherein the server includes an Internet site that includes a court information center.

25

41. The automated court system of claim 40 wherein the server automatically stores electronically filed documents in the court information center.
42. The automated court system of claim 40 wherein the server automatically
5 creates a court calendar that is accessible via the court information center.
43. The automated court system of claim 42 wherein the court calendar may be displayed by date or by case.
- 10 44. The automated court system of claim 42 wherein each time the court calendar is changed, the server automatically sends notification of the change to preselected parties.
45. The automated court system of claim 40 wherein the court information center
15 is publicly accessible.
46. The automated court system of claim 40 wherein the court information center includes full text search capabilities.
- 20 47. The automated court system of claim 46 wherein the court information center may be searched for all electronic filings in a particular case.
48. The automated court system of claim 1 wherein the server makes electronically filed documents available for display in the courtroom through the
25 courtroom management system.

49. The automated court system of claim 1 wherein the server monitors a status of communication resources used by the system.

5 50. The automated court system of claim 49 wherein the server generates an alarm if the communication resources reach an unacceptable level.

51. The automated court system of claim 1 wherein the clerk station issues identifying indicia to each said client that is approved to electronically file documents
10 with the server, the identifying indicia being unique to each said client and providing authentication of the documents electronically filed by each said client.

52. The automated court system of claim 1 wherein the clerk station issues an electronic signature to each said client that is approved to electronically file
15 documents with the server, the electronic signature being unique to each said client and providing authentication of the documents electronically filed by each said client.

53. The automated court system of claim 1 wherein the clerk station includes a case management module.

20

54. The automated court system of claim 53 wherein the case management module records information selected from the group consisting of nature of the dispute, parties involved, legal personnel involved, relevant phone numbers, and relevant addresses.

25

55. The automated court system of claim 53 wherein the case management module manages a court calendar.
56. The automated court system of claim 53 wherein the case management module manages a court docket.
57. The automated court system of claim 53 wherein the case management module performs statistical analysis.
58. The automated court system of claim 53 wherein the case management module generates reports.
59. The automated court system of claim 1 wherein the clerk station includes an electronic commerce interface for handling fees associated with electronic filing.
60. The automated court system of claim 1 wherein the clerk station interacts with the server to manage a court calendar.
61. The automated court system of claim 60 wherein the clerk station interacts with the server to provide access to the court calendar on the Internet.
62. The automated court system of claim 60 wherein the clerk station automatically notifies preselected parties of changes made to the court calendar.

63. The automated court system of claim 1 wherein the clerk station monitors a status of the server.
64. The automated court system of claim 1 wherein the courtroom management system makes documents electronically filed with the server available for display inside the courtroom.
65. The automated court system of claim 1 wherein the courtroom management system includes a podium having a graphical user interface that enables a user to actuate functions of the courtroom management system.
66. The automated court system of claim 65 wherein the podium includes a function that automatically hides an exhibit on a display screen.
67. The automated court system of claim 65 wherein the podium includes a timer that times a duration of a presentation.
68. The automated court system of claim 1 wherein the courtroom management system enables presentation of an exhibit on a display screen.
69. The automated court system of claim 68 wherein the exhibit may be telestrated on the display screen.
70. The automated court system of claim 69 wherein the exhibit may be telestrated in a plurality of colors.

71. The automated court system of claim 68 wherein the exhibit may be saved to a file.

5 72. The automated court system of claim 68 wherein the exhibit may be printed by a printer.

73. The automated court system of claim 68 wherein a specific area of the exhibit may be zoomed in.

10

74. The automated court system of claim 68 wherein the courtroom management system includes a physical object presenter that displays a physical object on the display screen.

15

75. The automated court system of claim 1 wherein the courtroom management system enables presentation of an exhibit on a display screen in a witness box.

76. The automated court system of claim 75 wherein the exhibit may be telestrated
20 from the witness box.

77. The automated court system of claim 1 wherein the courtroom management system includes video jacks for connecting video sources selected from the group consisting of computers, video cassette recorders, overhead projectors, and video
25 cameras.

78. The automated court system of claim 1 wherein the courtroom management system includes audio jacks for connecting audio sources selected from the group consisting of microphones, tape recorders, and compact disk players.

5

79. The automated court system of claim 1 wherein the courtroom management system enables simultaneous video recording of proceedings in a courtroom.

80. The automated court system of claim 1 wherein the courtroom management
10 system enables real time court reporting via broadcast over the Internet.

81. The automated court system of claim 1 wherein the courtroom management system enables real time court transcription.

15 82. The automated court system of claim 81 wherein the real time court transcription may be saved to a file.

83. The automated court system of claim 1 wherein the judge station includes accessories selected from the group consisting of a calculator, a calendar, a task list, a
20 contacts database, and a sentencing calendar.

84. The automated court system of claim 1 wherein the judge station includes a timer for timing durations of courtroom presentations.

85. The automated court system of claim 1 wherein the judge station includes at least one legal reference library.
86. The automated court system of claim 85 wherein the at least one legal reference library includes full text search capabilities.
87. The automated court system of claim 86 wherein search results from the at least one legal reference library may be transferred to an external word processing file.
88. The automated court system of claim 85 wherein the at least one legal reference library includes an internal word processor.
89. The automated court system of claim 1 wherein the judge station enables live conferencing over the Internet.
90. The automated court system of claim 1 wherein the server includes a wireless application protocol that enables wireless access to the server.
91. The automated court system of claim 90 wherein the wireless application protocol provides wireless access to court information stored on the server over the Internet.
92. A server for processing documents electronically filed by a client in an automated court system, the server being configured to:

- authenticate electronically filed documents;
- automatically send notification to the client upon receipt of an electronic filing;
- automatically send copies of electronically filed documents to preselected
- 5 parties;
- store original copies of electronically filed documents in an archive directory;
- store electronically filed documents in a case management database table;
- provide an Internet site including a publicly accessible court information center;
- 10 store electronically filed documents in the court information center;
- automatically create a court calendar that is accessible via the court information center; and
- make electronically filed documents available for display in a courtroom.
- 15 93. A computer readable media comprising software for operating an automated court system, the software being configured to instruct a data processing unit to:
 - allow a plurality of clients to electronically transmit documents to a server in a remote court from a plurality of client stations;
 - process the electronically filed documents from the plurality of client stations
 - 20 in the server;
 - allow management of the electronically filed documents by a clerk station;
 - make the electronically filed documents available for display in a courtroom;
 - and
 - allow a judge station to control the automated court system.
- 25

94. A method for operating an automated court system comprising the steps of:
- electronically transmitting documents to a server in a remote court from a plurality of client stations;
 - processing the electronically filed documents in the server;
 - 5 managing the automated court system from a clerk station;
 - displaying the electronically filed documents in a courtroom; and
 - controlling the automated court system from a judge station.

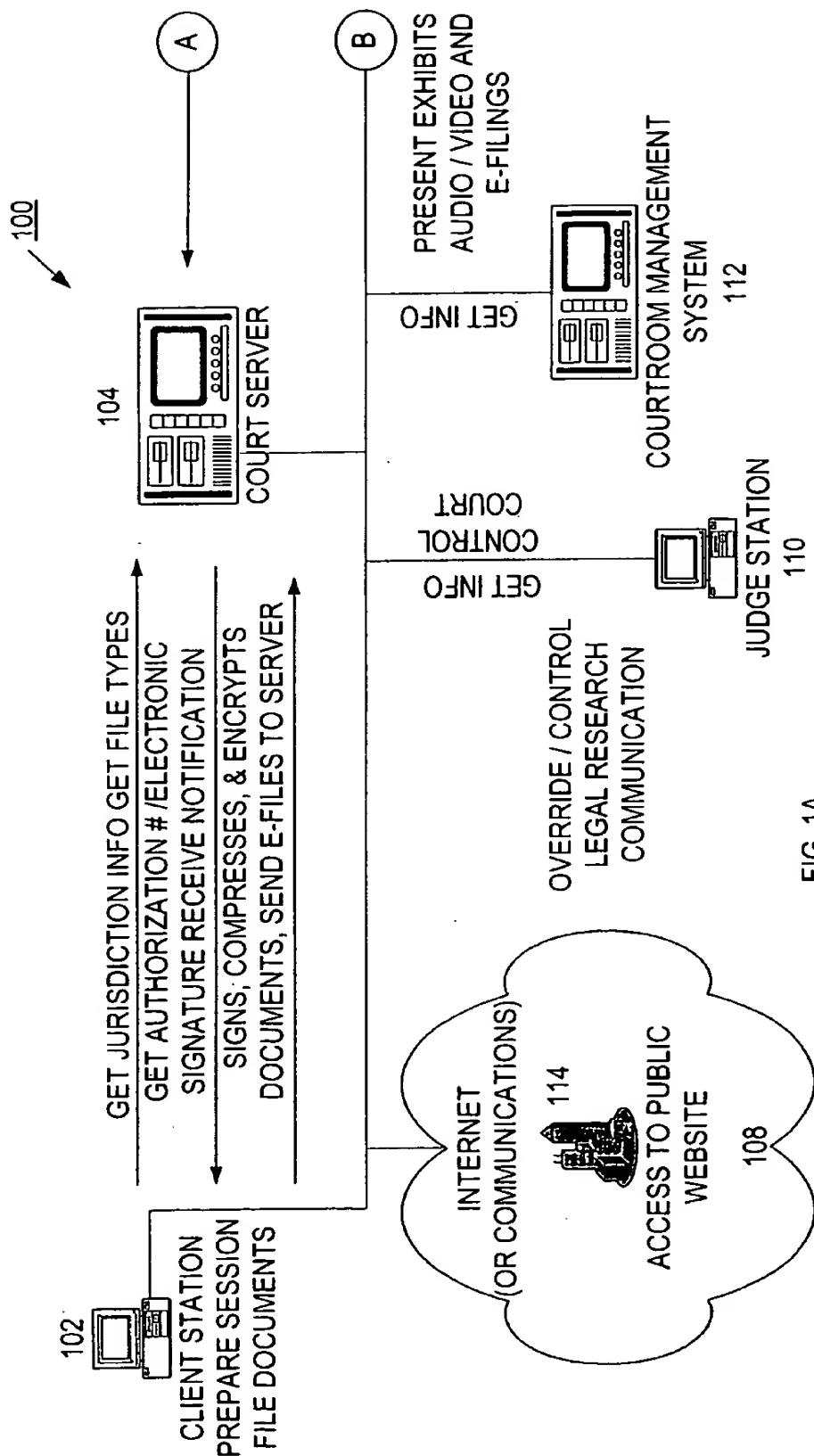


FIG. 1A

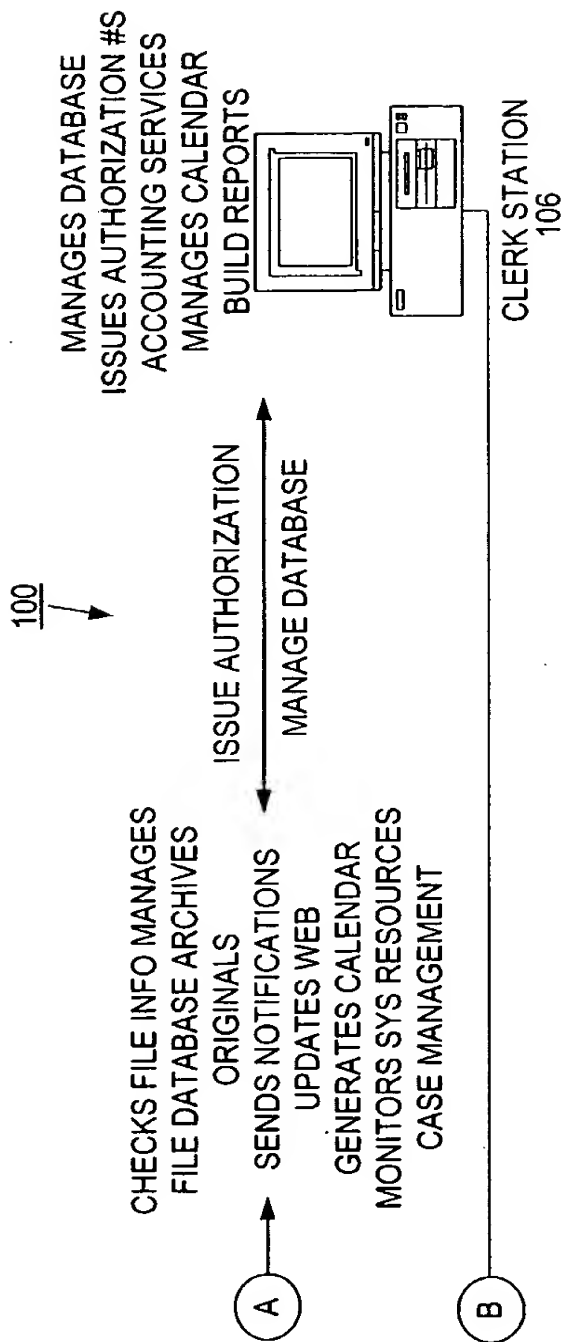


FIG. 1B

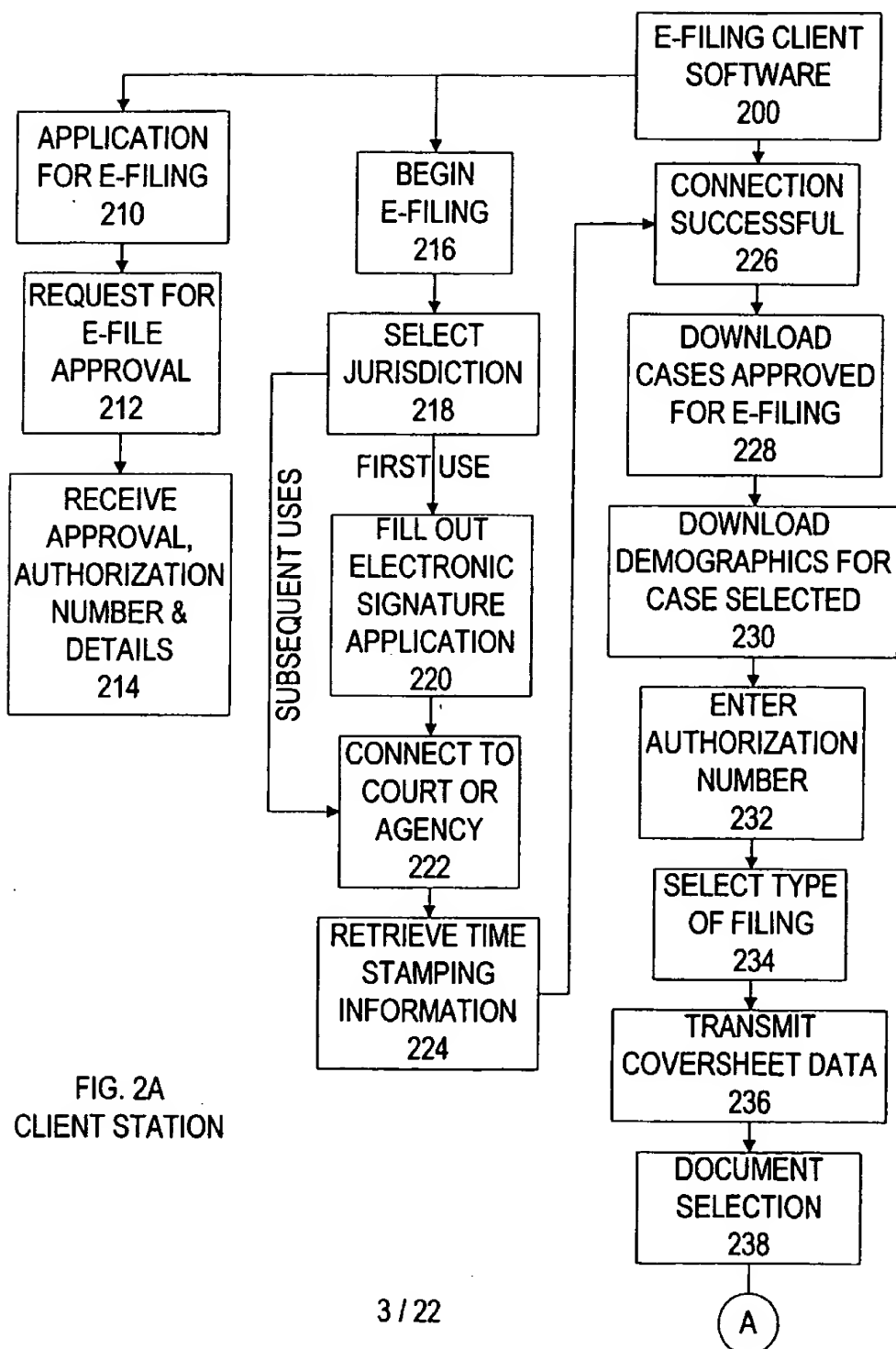


FIG. 2A
CLIENT STATION

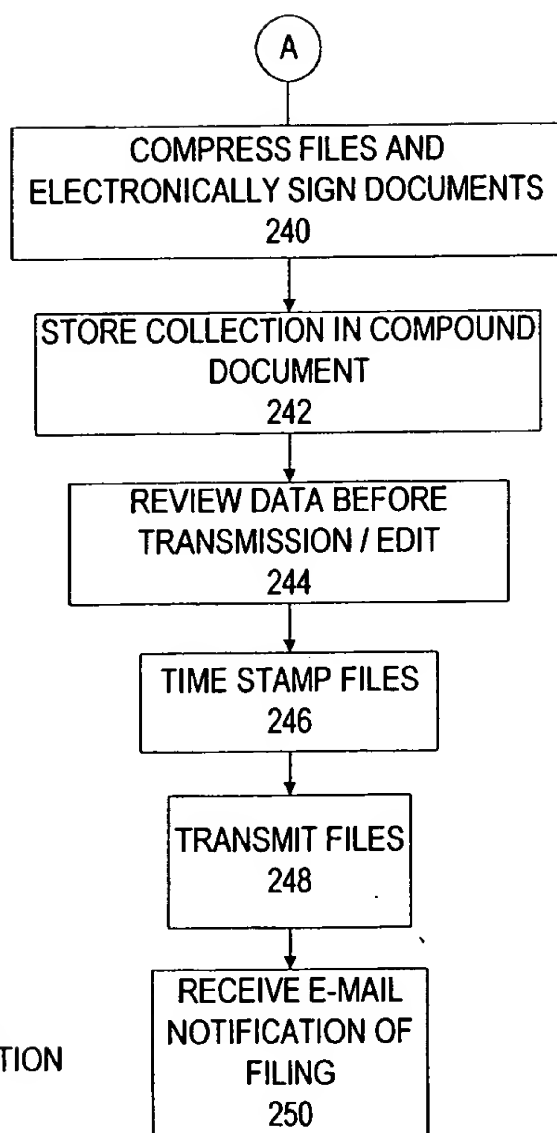


FIG. 2B
CLIENT STATION

Welcome to the cx2000 Electronic Filing System

cx2000

Make certain you have the following items and have read the Official Court Rules on electronic filing.

Your authorization number supplied by the court.

An active Internet connection.

The electronic file that will be submitted in this filing.

Select Court or Jurisdiction

The NC Business Court

Court Rules

Document Guidelines

Continue ->

Exit from system

FIG. 3

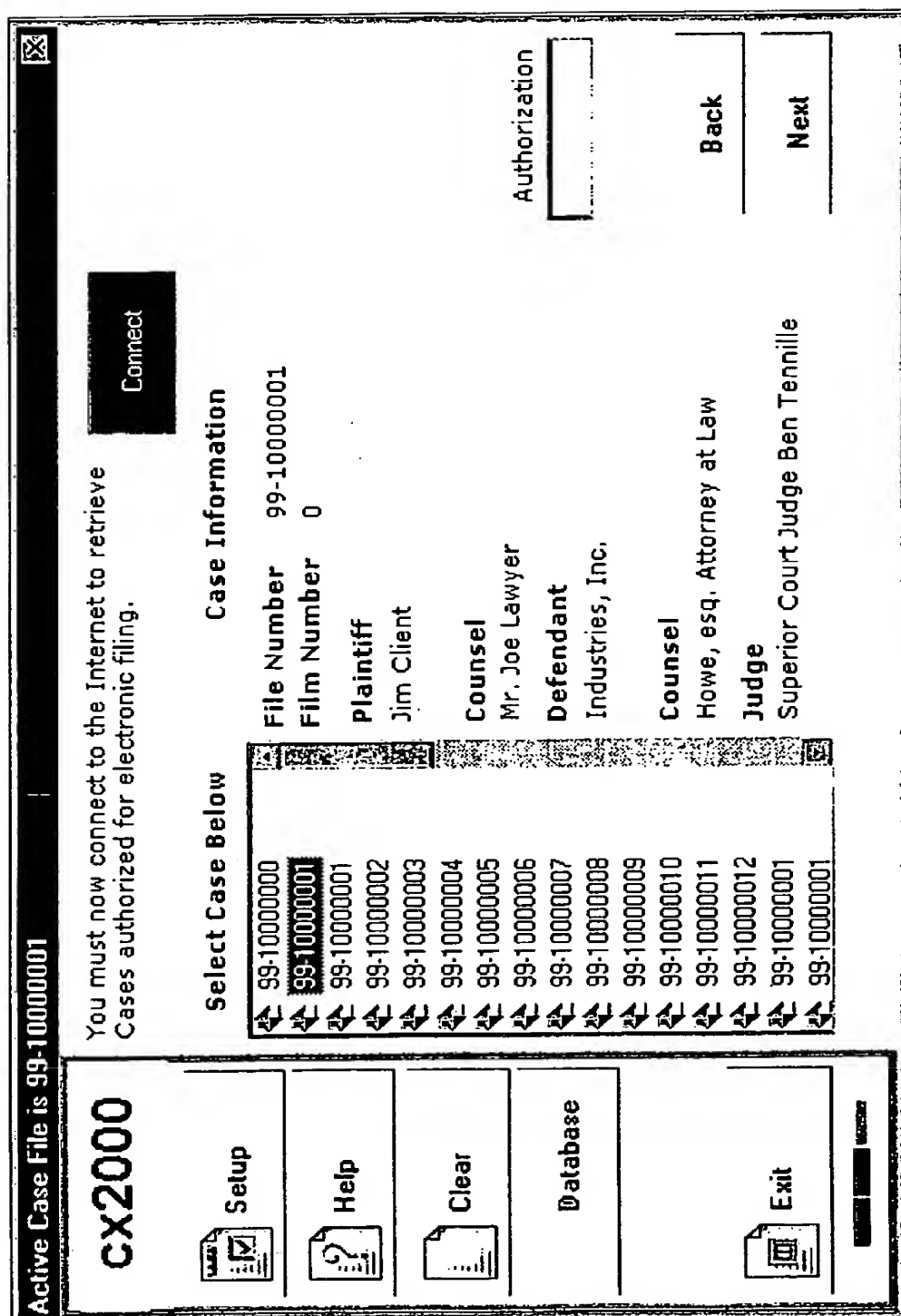


FIG. 4

Active Case File is 99-100000001

cx2000

Setup

Help

Clear

Database

Exit

Please select the TYPE and PURPOSE of your filing to proceed to the next step.

Type of Filing

☒ Civil Action

☐ Motion

☐ Court Action

☐ Exhibit

Purpose of Filing

☒ File in Court (official)

☐ File for Review (unofficial)

Next

FIG. 5

Active Case File is 99-10000000

CX2000

Setup

Help

Clear

Database

Exit

The following additional information is required for you to perform an official electronic filing in the court.

General Information

In The General Court Of Justice: ☐ District ☒ Superior Court

☒ Initial Appearance in Case Counsel For ☒ All Plaintiffs ☐ All Defendant

☐ Initial Filing

☐ Subsequent Filing

☐ Change of Address

☐ Other (List Parties Represented)

Civil Action Cover Sheet Information

Type of Pleading ☐ Complaint

Claim for Relief for ☐ none

Other or Additional

☐ Controversy Does not exceed \$15,000

☐ Stipulate to Arbitration

☒ Complex Litigation

Jury Demanded In Pleading: ☒ Yes ☐ No

Back

Next

FIG. 6









Active Case File is 99-10000000	CX2000	
	Setup	
	Help	
	Clear	
Database		
<p>The following additional information is required for you to perform an official electronic filing in the court.</p> <p>General Information</p> <p>In The General Court Of Justice: <input type="checkbox"/> District <input checked="" type="checkbox"/> Superior Court</p> <p><input checked="" type="checkbox"/> Initial Appearance in Case Counsel For <input checked="" type="checkbox"/> All Plaintiffs <input type="checkbox"/> Initial Filing <input type="checkbox"/> All Defendant <input type="checkbox"/> Subsequent Filing <input type="checkbox"/> Change of Address <input type="checkbox"/> Other (List Parties Represented) _____</p> <p>Civil Action Cover Sheet Information</p> <p>Type of Pleading <input type="checkbox"/> Complaint _____</p> <p>Claim for Relief for <input type="checkbox"/> none _____</p> <p>Other or Additional _____</p> <p><input type="checkbox"/> Controversy Does not exceed \$15,000 <input type="checkbox"/> Stipulate to Arbitration <input checked="" type="checkbox"/> Complex Litigation Jury Demanded In Pleading: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p style="text-align: right;">Back Next</p>		
	Exit	

FIG. 6

Active Case File is 99-100000000	
CX2000	
 Setup	Select File motion to compel.htm C:\WINDOWS\Profiles\Wino\My Documents\motion to compel.htm
 Help	Select File motion to compel.htm C:\WINDOWS\Profiles\Wino\My Documents\motion to compel.htm
 Clear	Select File motion to compel.htm C:\WINDOWS\Profiles\Wino\My Documents\motion to compel.htm
Database	Select File motion to compel.htm C:\WINDOWS\Profiles\Wino\My Documents\motion to compel.htm
 Exit	Select File motion to compel.htm C:\WINDOWS\Profiles\Wino\My Documents\motion to compel.htm

Select the document or other file to attach to this filing.

motion to compel.htm

C:\WINDOWS\Profiles\Wino\My Documents\motion to compel.htm

Please select additional options for distribution of your filing.

☐ Print Hard Copy for Paper Filing

Other E-Mail Recipients

Note: Attorneys on Record will receive a copy automatically from the filing system

Other Fax Recipients

Back

Next

FIG. 7

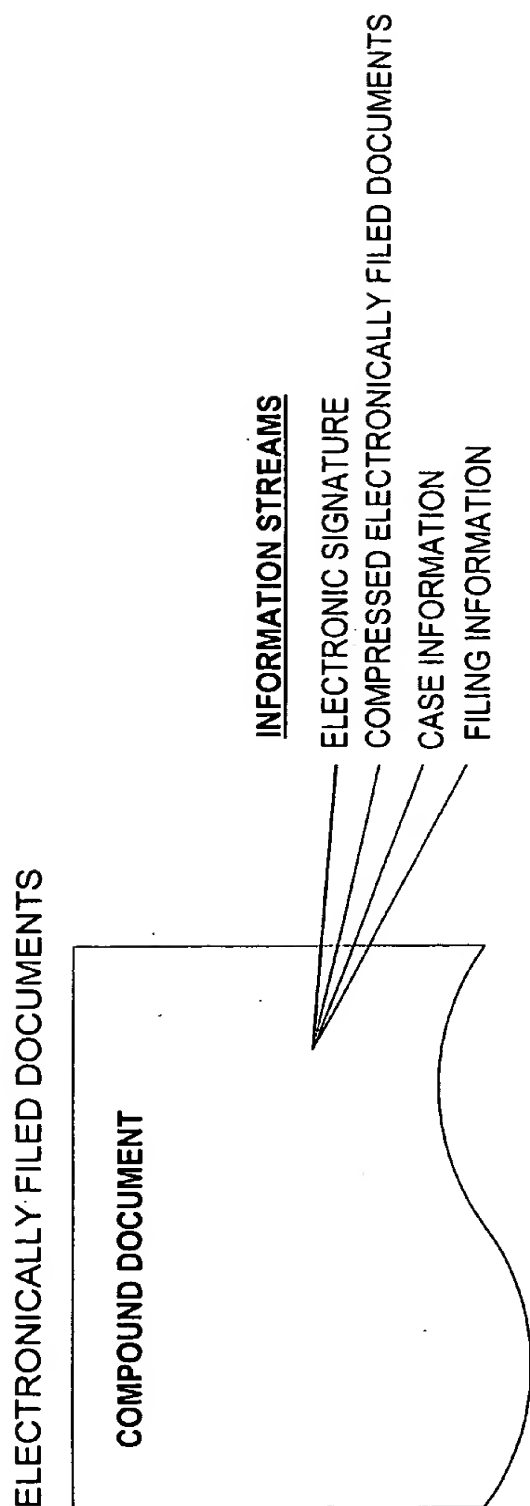


FIG. 8

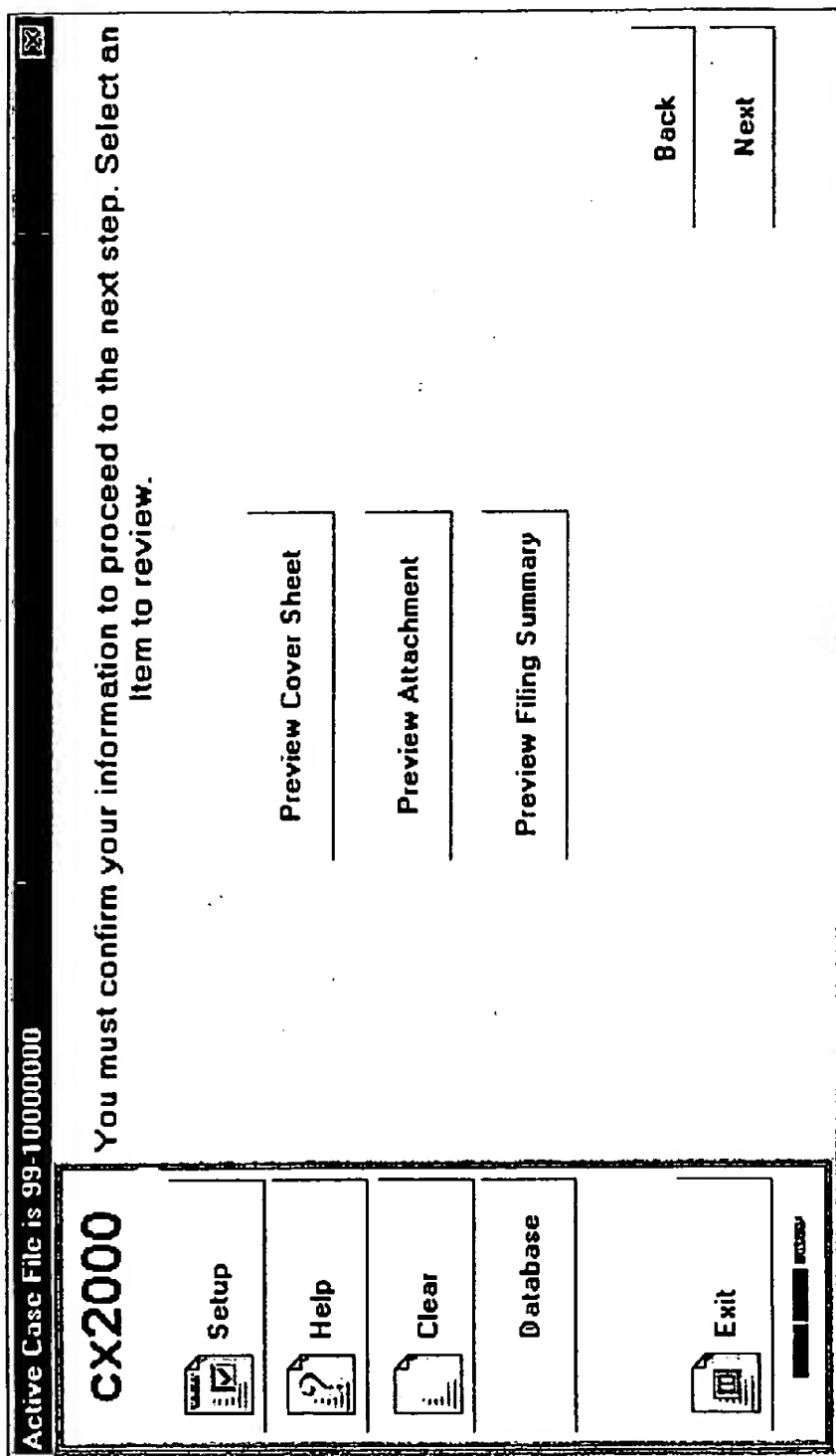


Fig. 9

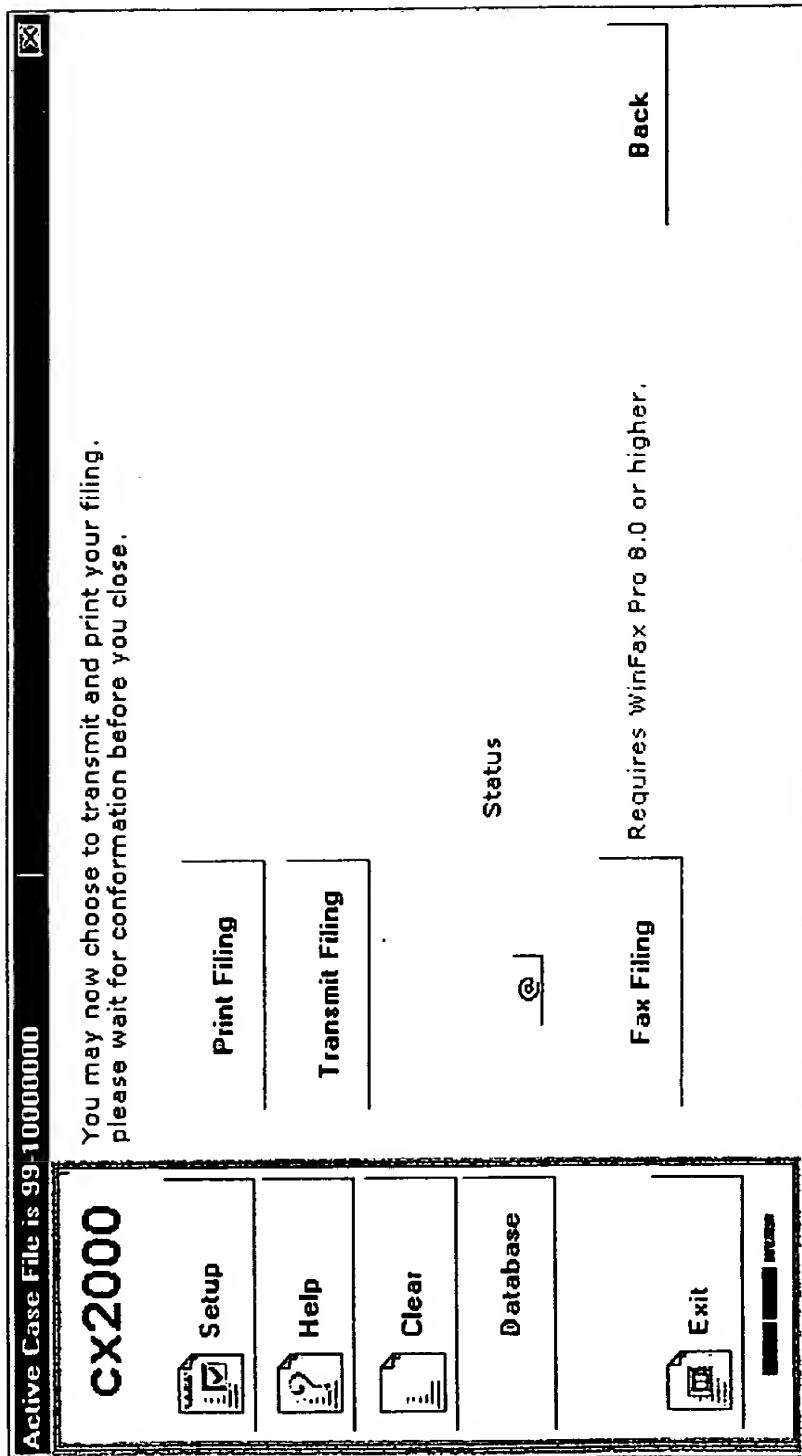


FIG. 10

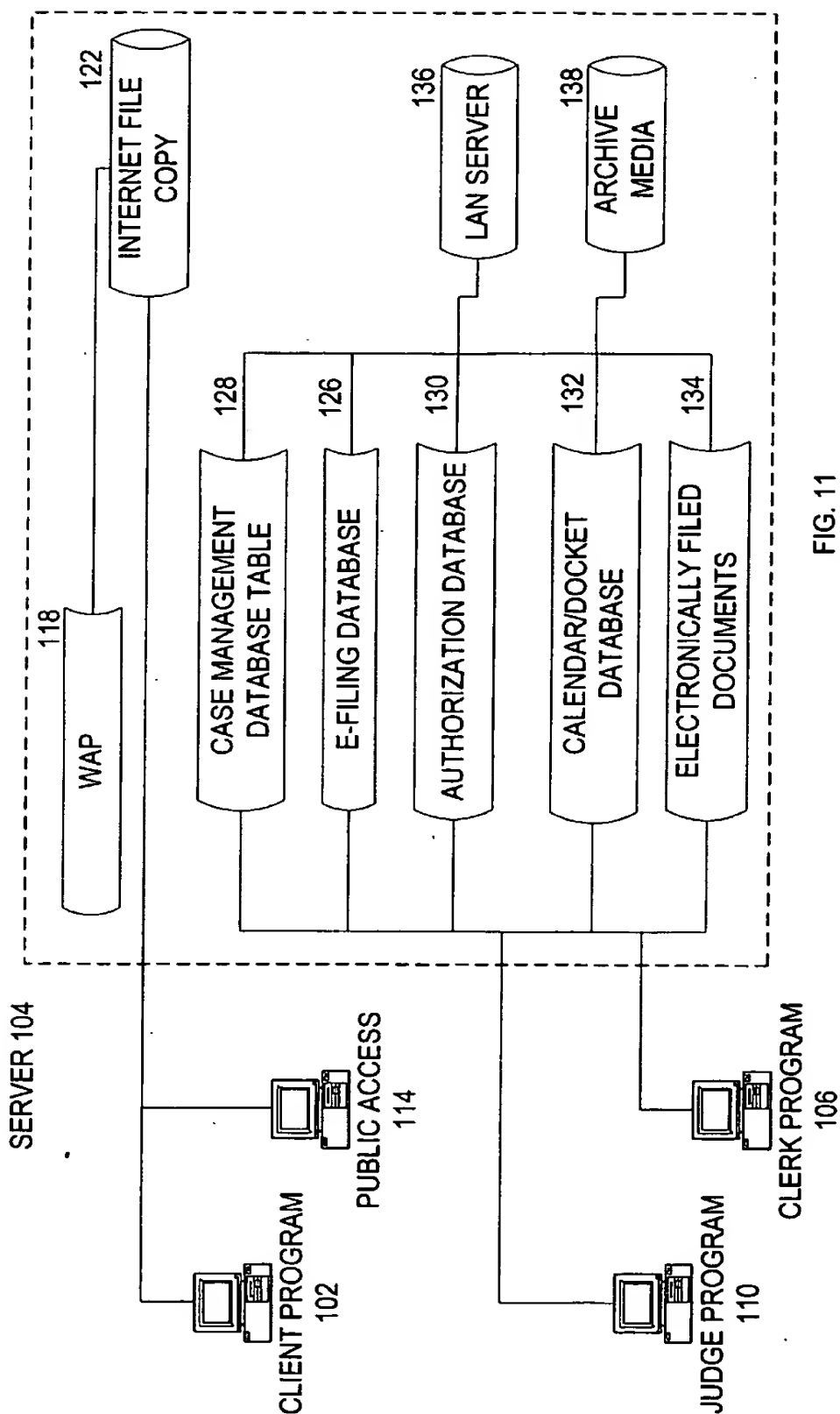


FIG. 11
ELECTRONIC FILE SERVER

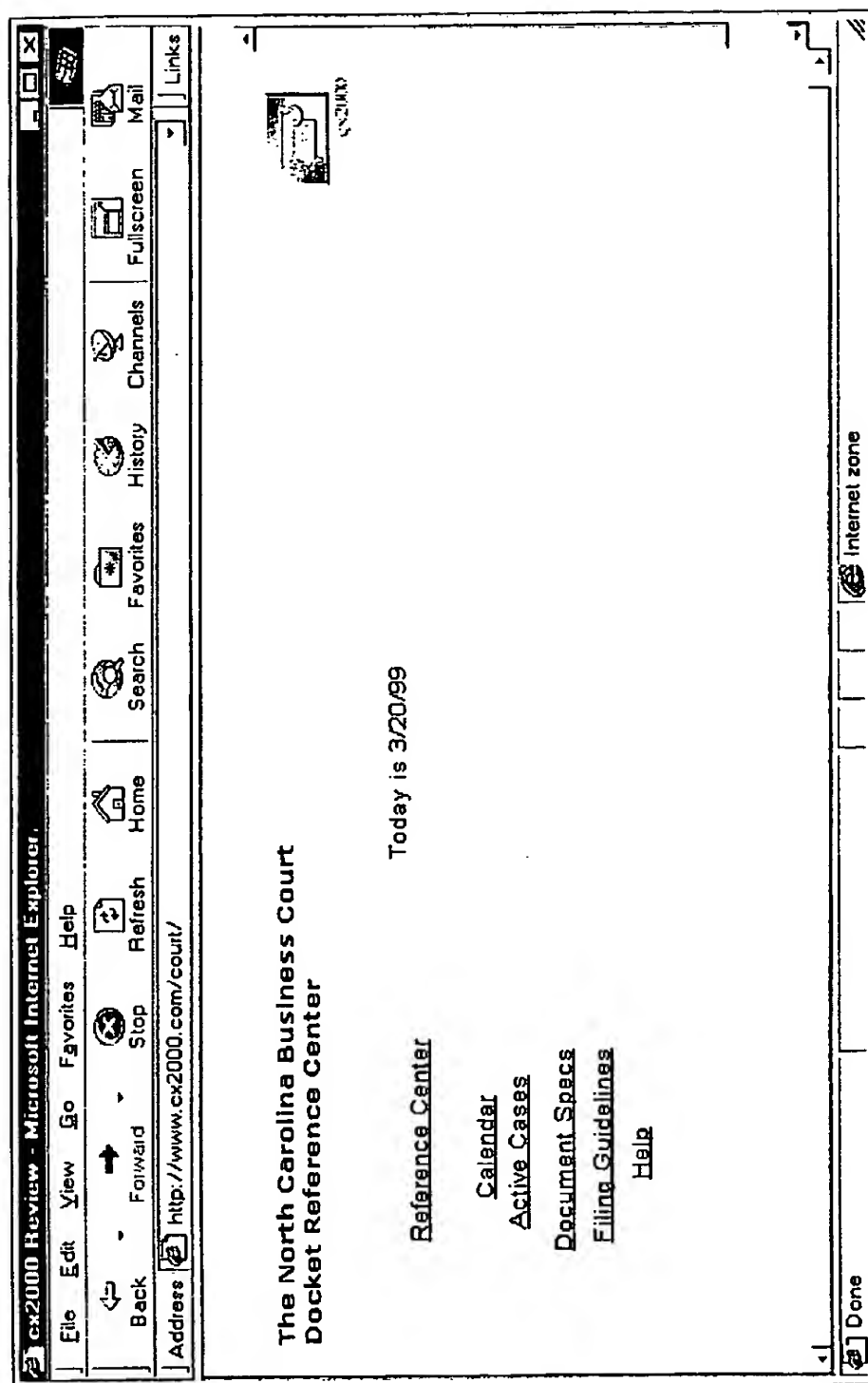


FIG. 12

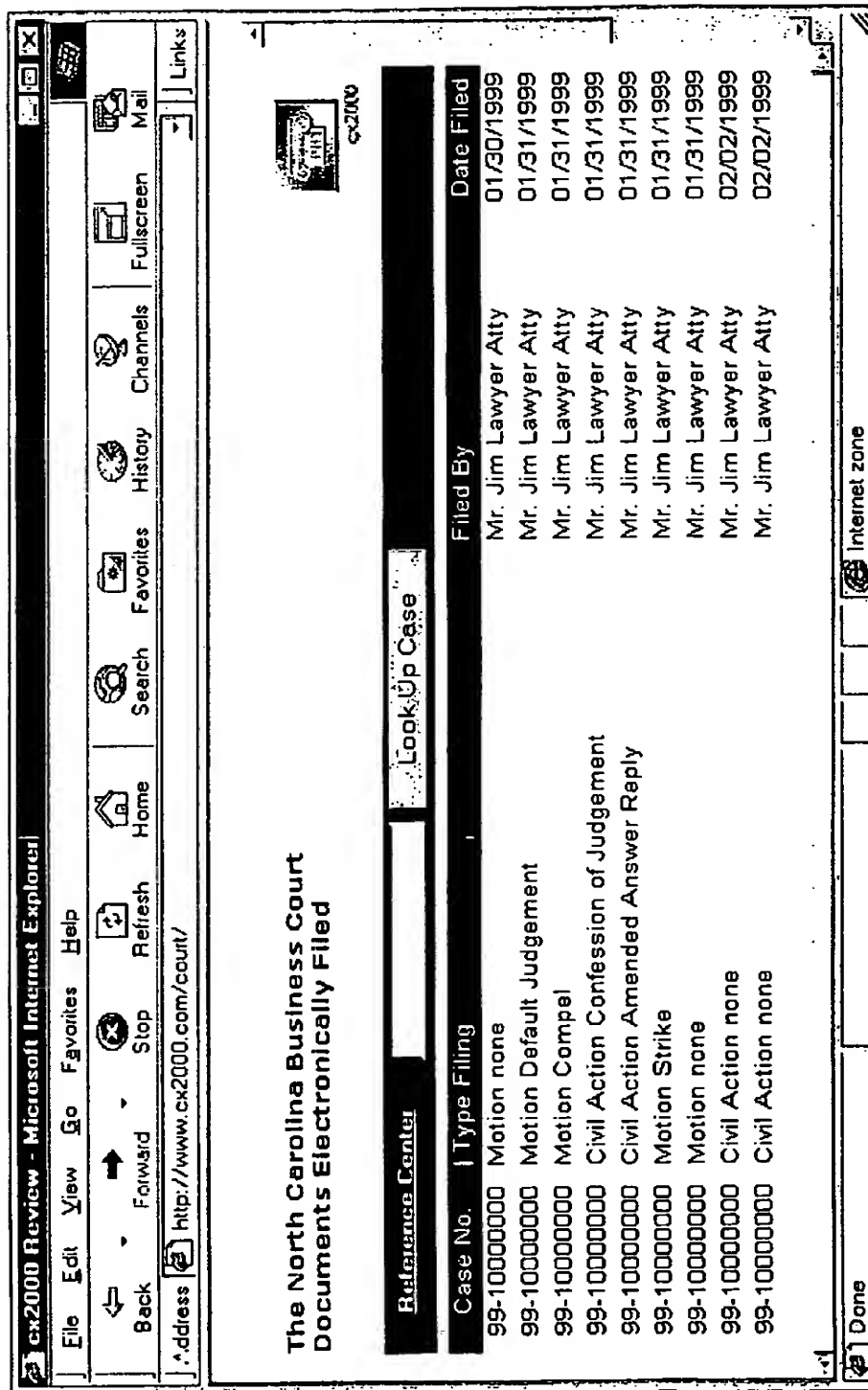


FIG. 13

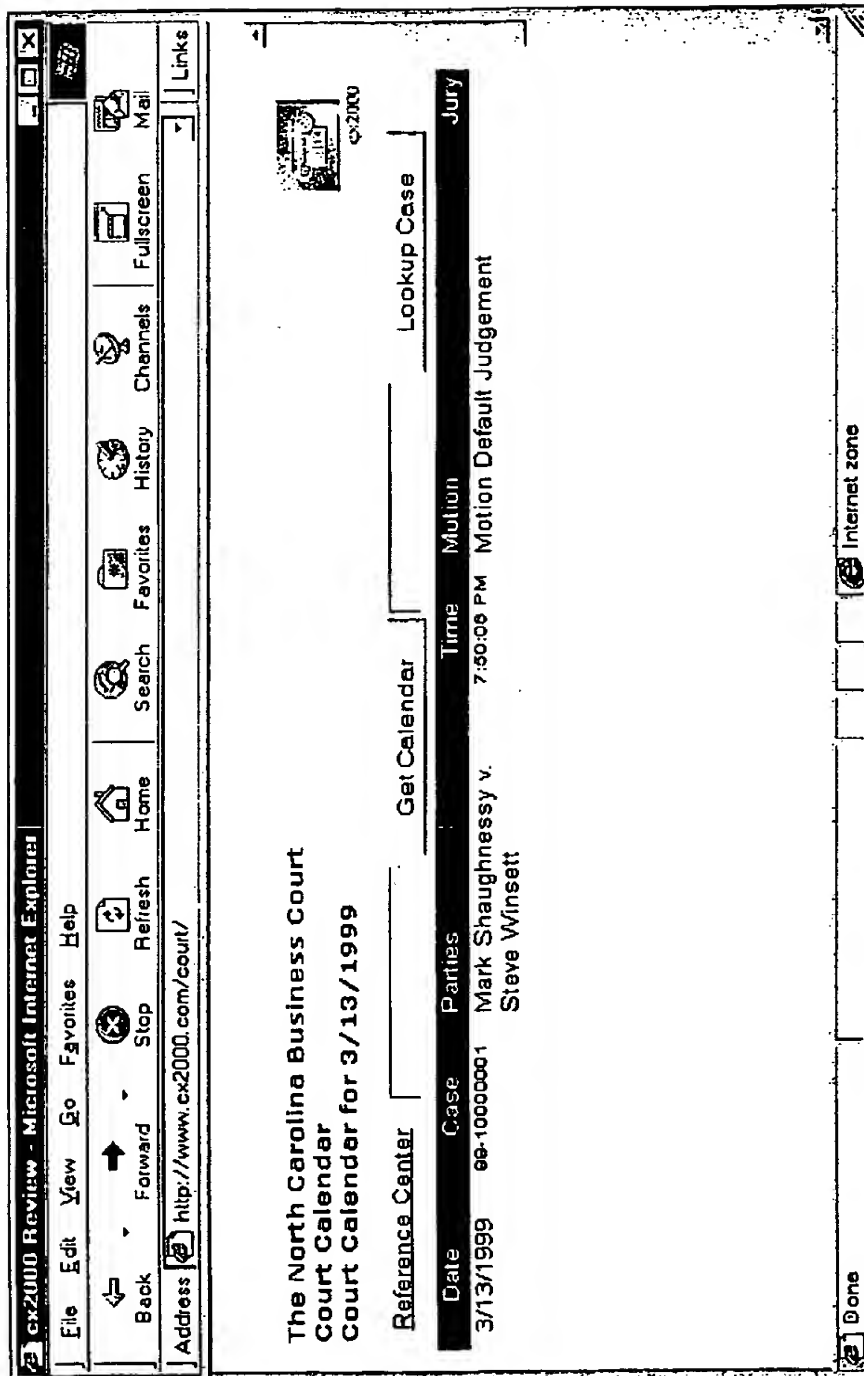


FIG. 14

CX2000

File Services View Tools Reports Help

Docket | Plaintiff Information | Defendant Information | Notify | Court Server | Filing Management | The Internet

Current Docket is [Wednesday, March 10, 1999]

Case	Hearing	Jury	Parties	Motion
99-10000000	3/10/1999	Yes	Mark Sheughnessy v. Steve Winsett Mark vs. Steve	Civil Action Confession of Jur Motion Strike
99-10000000	3/10/1999			

Today Edit Save

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8 99-10000000	9	10 99-10000000 99-10000000	11	12	13 99-10000001
14	15	16	17	18	19	20
21	22	23	24 [REDACTED] 99-10000001	25 99-10000001	26 99-10000001	27
28	29	30	31			

FIG. 15

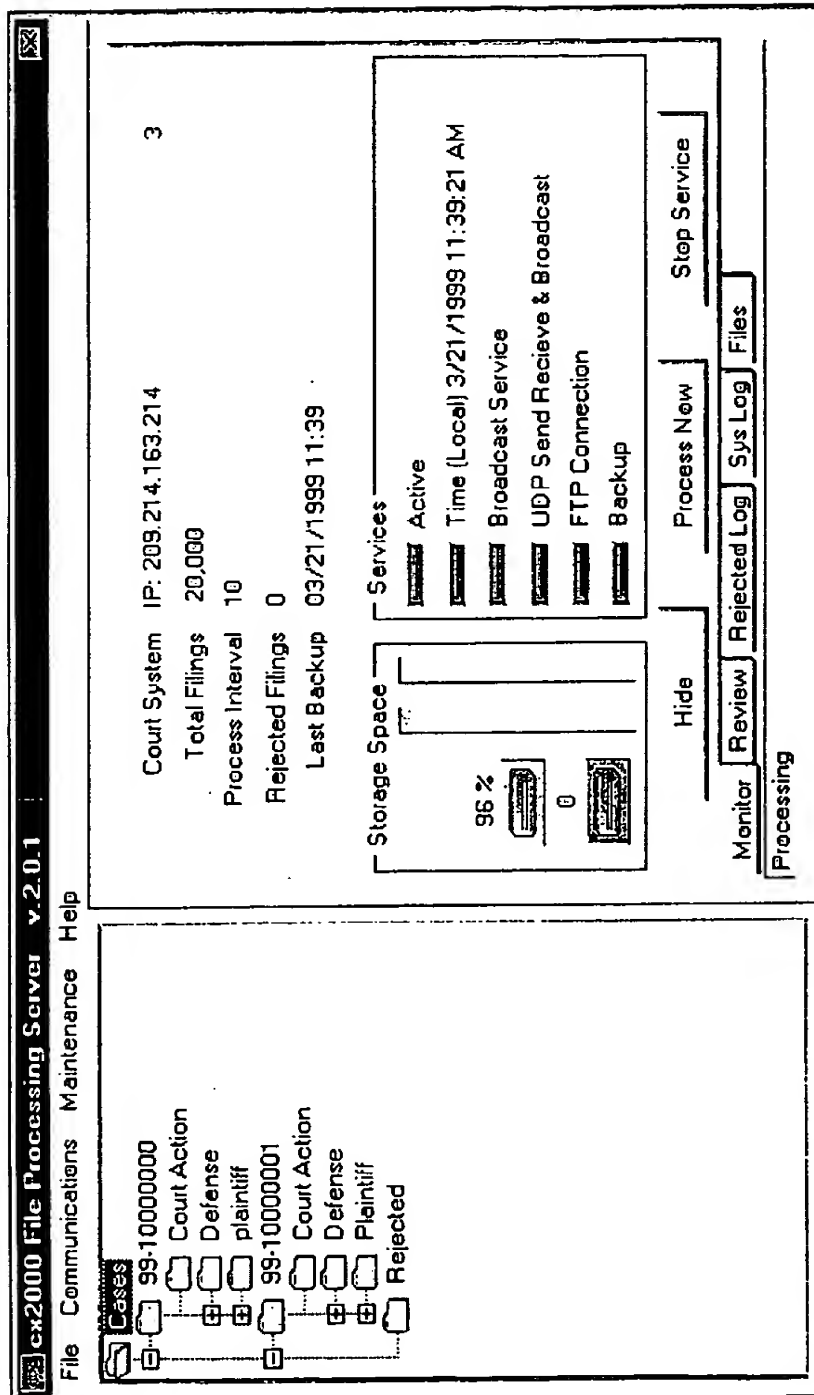
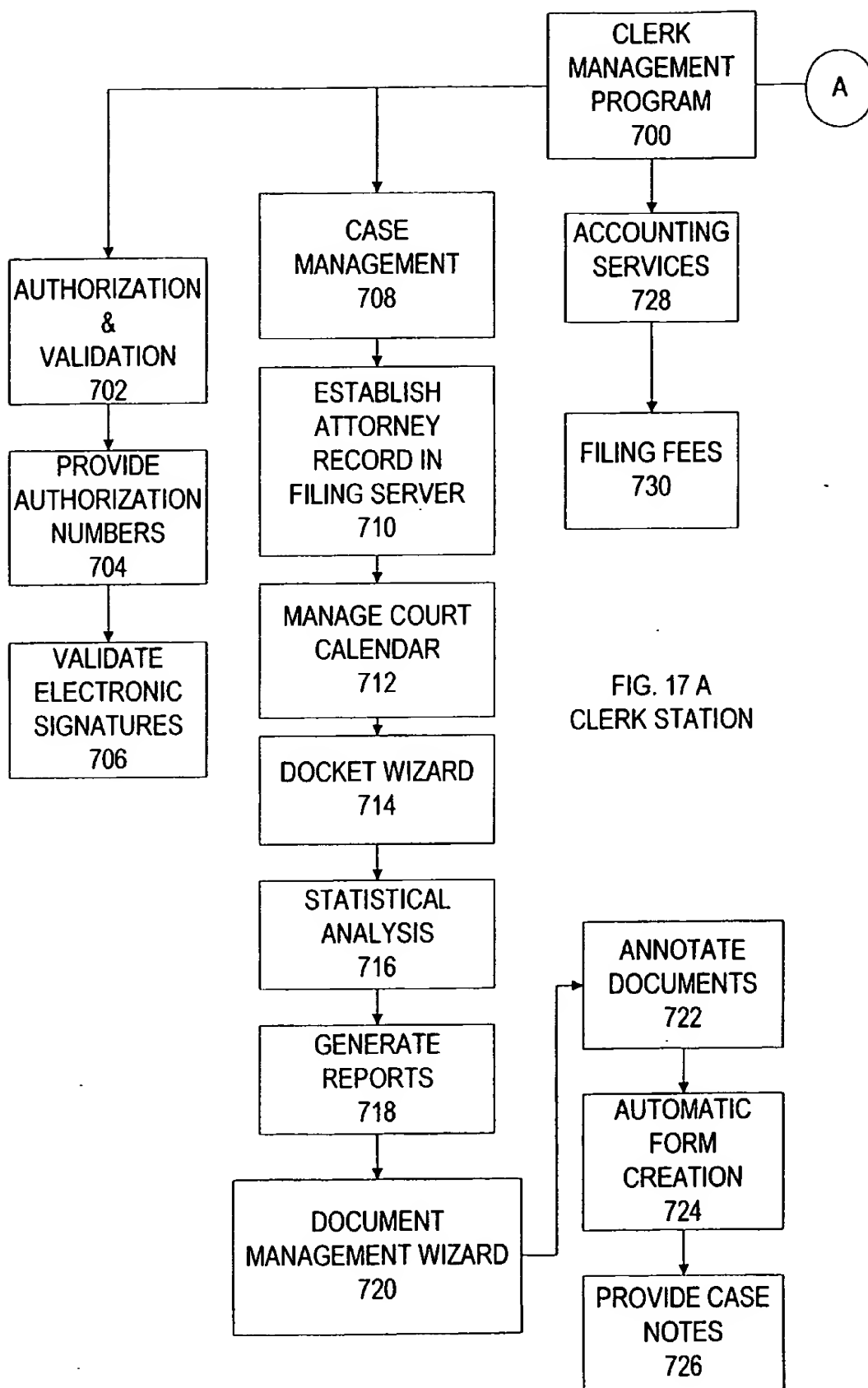


FIG. 16

FIG. 17 A
CLERK STATION

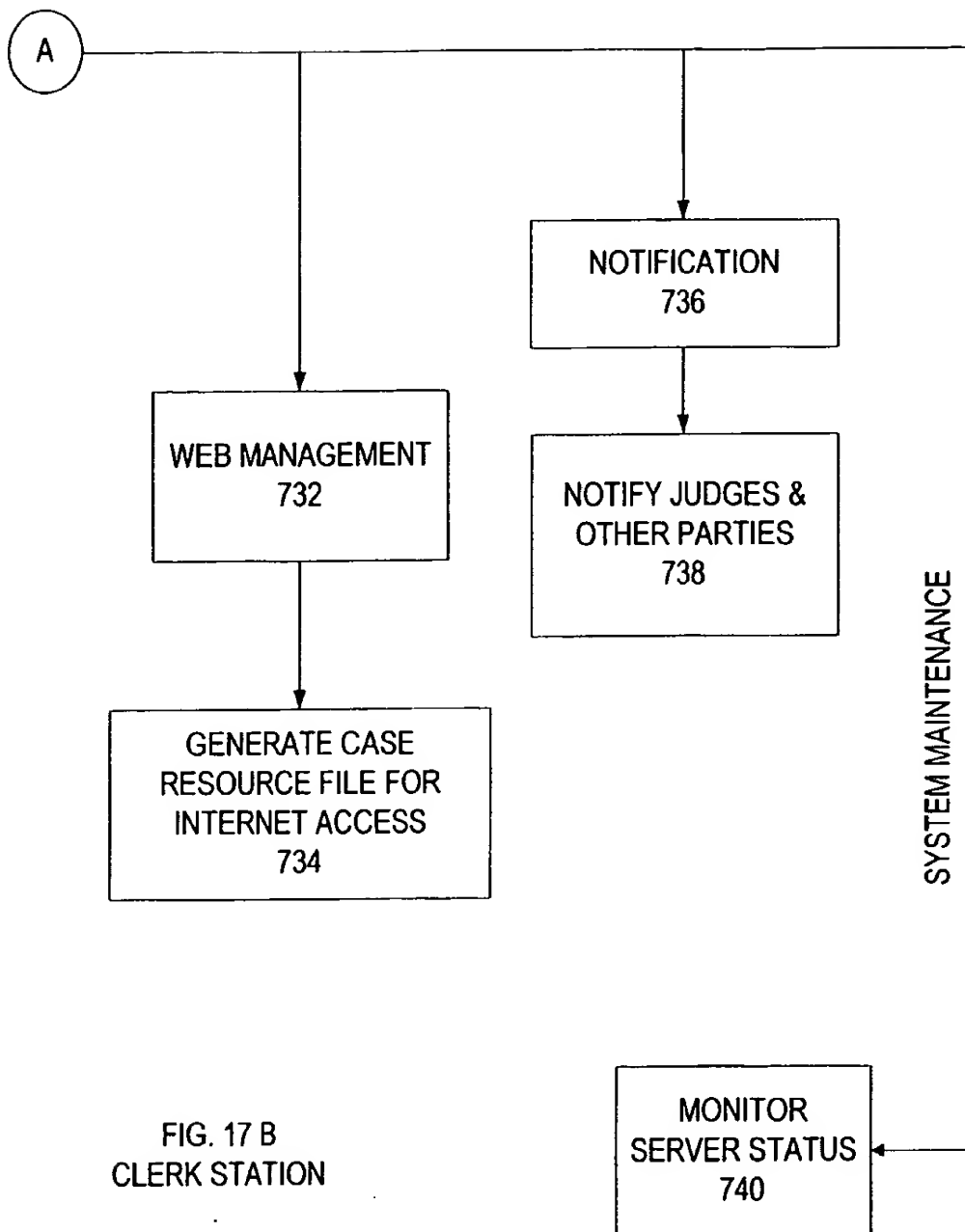


FIG. 17 B
CLERK STATION

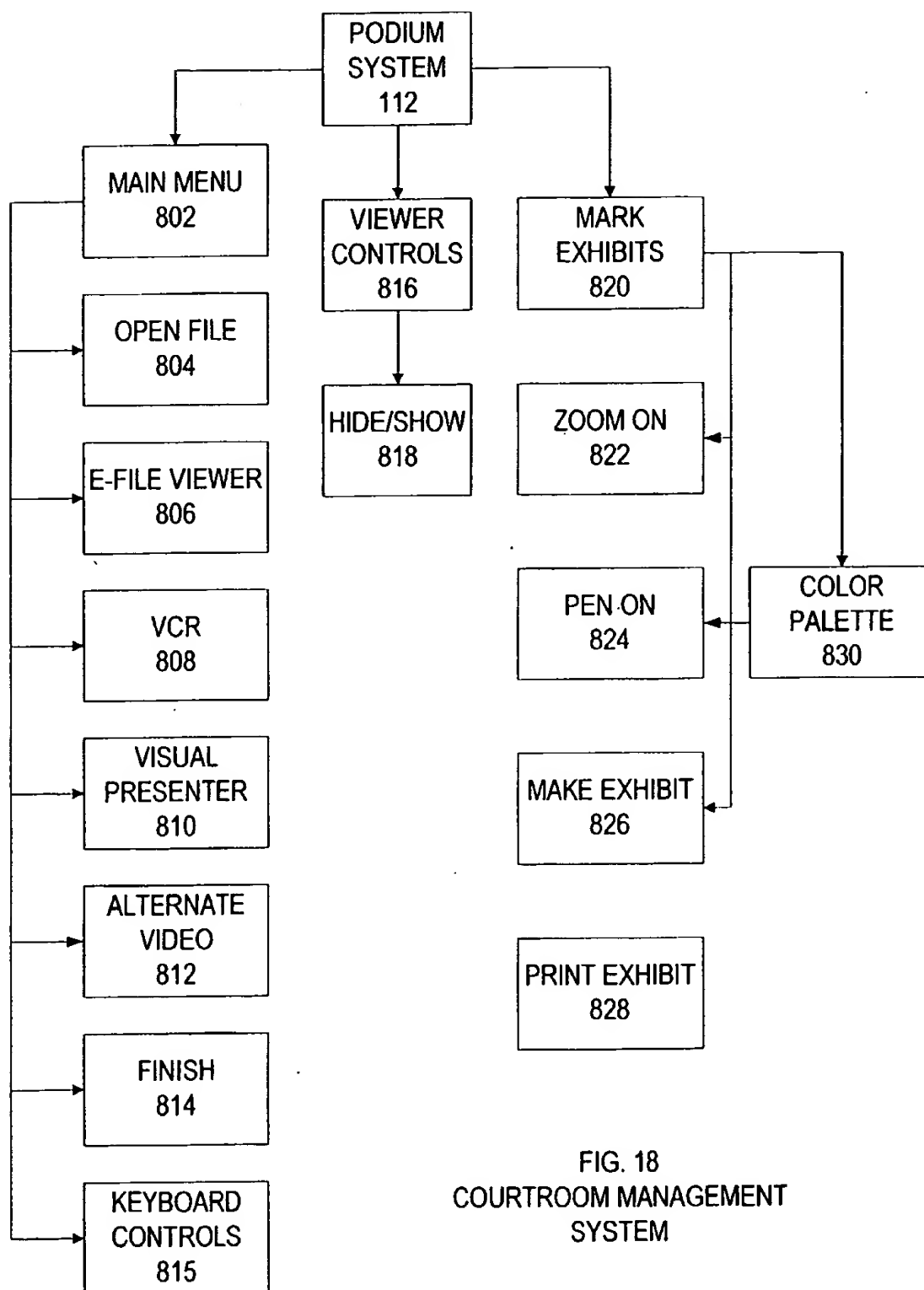


FIG. 18
COURTROOM MANAGEMENT
SYSTEM

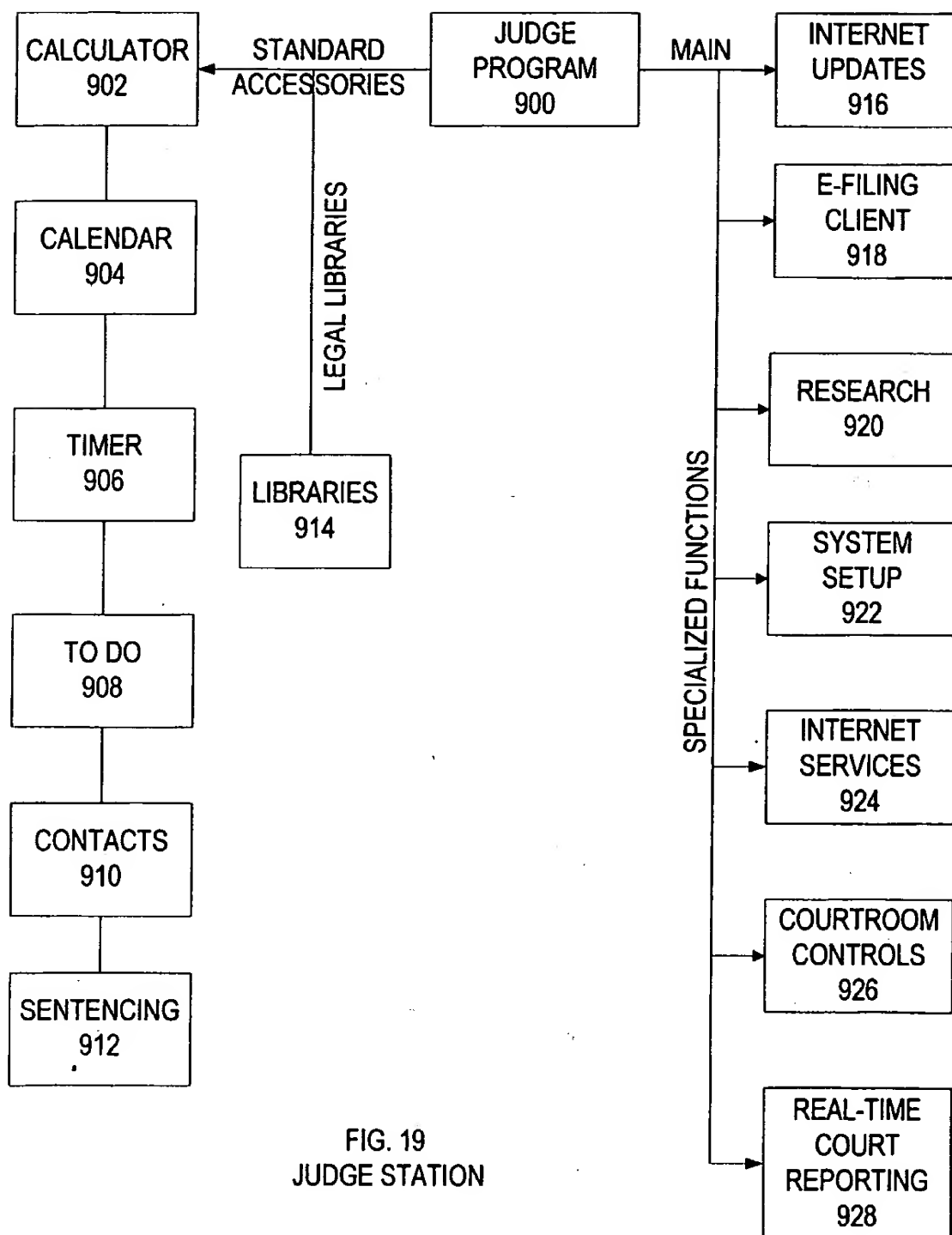


FIG. 19
JUDGE STATION

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/24721

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/60

US CL : 705/1

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/1; 709/201, 203, 204, 220, 238

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Dialog, Corporate Resource Net, Proquest Direct

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US 6,091,408 A (TREIBITZ et al) 18 July 2000 (18.07.2000), See entire document	1-94
A	Maglitts, Joseph, "IS at O.J. City", Computerworld, Volume 29, Issue 20, 15 May 1995	1-94
A	Kennedy, Daniel B., "The Future of Filing", ABA Journal, Vol. 80, pg. 32, July 1994	1-94
A	Bozman, Jean S., "Seattle System Frees Courts from Paper Chase", Computerworld, Vol. 25, No. 45, pg. 29, 11 November 1991	1-94
A	Hart, Timothy, "Brenner Molds Kansas Court Into Model for the Nation", Wichita Business Journal, Vol. 12, No. 42, pg. 20, 03 October 1997	1-94
A	Lai, Lydia C., "New York Courts Open Doors of Justice System to People Representing Themselves", Capital District Business Review, Vol. 24, Issue 2, pg. 26, 28 April 1997	1-94
A	Informix Software Inc., "INFORMIX 5: Government Agencies Install Informix Software Solutions at Record Pace", Businesswire, 08 July 1992, Dialog File 810:Business Wire	1-94
A	"The Electronic Courtroom Still Under Development As the Year Ends", Computer COUNSEL, Vol. 8, No. 12, December 1997	1-94
A	US 5,159,180 A (FEILER) 27 October 1992 (27.10.1992), See entire document	1-94
A	US 5,535,322 A (HECHT) 09 July 1996 (09.07.1996), See entire document	1-94

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 21 October 2000 (21.10.2000)	Date of mailing of the international search report 27 DEC 2000
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer James Trammell <i>James R. Matthews</i> Telephone No. (703)305-9700